

[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)**Search Results -**[Terms](#)[Documents](#)

14 and view point

15

Database:

US Patents Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

[Refine Search:](#)[Clear](#)**Search History****Today's Date: 9/22/2000**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT,JPAB,EPAB,DWPI,TDBD	14 and view point	15	<u>L5</u>
USPT,JPAB,EPAB,DWPI,TDBD	13 and image	88	<u>L4</u>
USPT,JPAB,EPAB,DWPI,TDBD	12 and texture map	88	<u>L3</u>
USPT,JPAB,EPAB,DWPI,TDBD	11 and 3d	459	<u>L2</u>
USPT,JPAB,EPAB,DWPI,TDBD	computer graphic and surface and inside and point	1377	<u>L1</u>

Generate Collection**Search Results - Record(s) 11 through 15 of 15 returned.** **11. Document ID: US 5764228 A**

L5: Entry 11 of 15

File: USPT

Jun 9, 1998

US-PAT-NO: 5764228

DOCUMENT-IDENTIFIER: US 5764228 A

TITLE: Graphics pre-processing and rendering system

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Draw. Desc](#) | [Image](#) **12. Document ID: US 5764243 A**

L5: Entry 12 of 15

File: USPT

Jun 9, 1998

US-PAT-NO: 5764243

DOCUMENT-IDENTIFIER: US 5764243 A

TITLE: Rendering architecture with selectable processing of multi-pixel spans

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Draw. Desc](#) | [Image](#) **13. Document ID: US 5745667 A**

L5: Entry 13 of 15

File: USPT

Apr 28, 1998

US-PAT-NO: 5745667

DOCUMENT-IDENTIFIER: US 5745667 A

TITLE: 3d graphics apparatus using texture images with displacement information[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Draw. Desc](#) | [Image](#) **14. Document ID: US 5701444 A**

L5: Entry 14 of 15

File: USPT

Dec 23, 1997

US-PAT-NO: 5701444

DOCUMENT-IDENTIFIER: US 5701444 A

TITLE: Three-dimensional graphics subsystem with enhanced support for graphical user interface

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Draw. Desc](#) | [Image](#) **15. Document ID: US 4727365 A**

L5: Entry 15 of 15

File: USPT

Feb 23, 1988

US-PAT-NO: 4727365
DOCUMENT-IDENTIFIER: US 4727365 A
TITLE: Advanced video object generator

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Drawl Desc](#) | [Image](#)

[Generate Collection](#)

Terms	Documents
14 and view point	15

[Display](#)

10 Documents, starting with Document: 15

Display Format: [TI](#) [Change Format](#)

[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)**Search Results -**

Terms	Documents
l12 and visible space	1

Database: US Patents Full Text DatabaseJPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins[Refine Search:](#)[Clear](#)**Search History**

Today's Date: 9/22/2000

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT,JPAB,EPAB,DWPI,TDBD	l12 and visible space	1	<u>L14</u>
USPT,JPAB,EPAB,DWPI,TDBD	l12 and visual world	2	<u>L13</u>
USPT,JPAB,EPAB,DWPI,TDBD	l11 and depth	257	<u>L12</u>
DWPI,USPT,EPAB,JPAB,TDBD	l5 and (3d or three dimensional)	497	<u>L11</u>
DWPI,USPT,EPAB,JPAB,TDBD	visible stimuli	8	<u>L10</u>
USPT,JPAB,EPAB,DWPI,TDBD	stereographic projection	75	<u>L9</u>
USPT,JPAB,EPAB,DWPI,TDBD	circular perspective	6	<u>L8</u>
USPT,JPAB,EPAB,DWPI,TDBD	p-sphere	0	<u>L7</u>
USPT,JPAB,EPAB,DWPI,TDBD	p-surface	52	<u>L6</u>
USPT,JPAB,EPAB,DWPI,TDBD	texture map	696	<u>L5</u>
USPT,JPAB,EPAB,DWPI,TDBD	visible world	6	<u>L4</u>
USPT,JPAB,EPAB,DWPI,TDBD	l2 and visible world	0	<u>L3</u>
USPT,JPAB,EPAB,DWPI,TDBD	full and surround and image and data	3004	<u>L2</u>
DWPI,USPT,EPAB,JPAB,TDBD	full surround image data	0	<u>L1</u>

Generate Collection**Search Results - Record(s) 1 through 6 of 6 returned.** **1. Document ID: US 5826058 A**

L4: Entry 1 of 6

File: USPT

Oct 20, 1998

US-PAT-NO: 5826058

DOCUMENT-IDENTIFIER: US 5826058 A

TITLE: Method and apparatus for providing an external indication of internal cycles in a data processing system

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **2. Document ID: US 5678002 A**

L4: Entry 2 of 6

File: USPT

Oct 14, 1997

US-PAT-NO: 5678002

DOCUMENT-IDENTIFIER: US 5678002 A

TITLE: System and method for providing automated customer support

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **3. Document ID: US 5675749 A**

L4: Entry 3 of 6

File: USPT

Oct 7, 1997

US-PAT-NO: 5675749

DOCUMENT-IDENTIFIER: US 5675749 A

TITLE: Method and apparatus for controlling show cycles in a data processing system

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **4. Document ID: US 3914800 A**

L4: Entry 4 of 6

File: USPT

Oct 28, 1975

US-PAT-NO: 3914800

DOCUMENT-IDENTIFIER: US 3914800 A

TITLE: Fluid mechanical tactile oscilloscope to augment the five senses

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **5. Document ID: US 3628193 A**

L4: Entry 5 of 6

File: USPT

Dec 21, 1971

US-PAT-NO: 3628193
DOCUMENT-IDENTIFIER: US 3628193 A
TITLE: TACTILE IMAGE PROJECTION SYSTEM

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Draw. Desc](#) | [Image](#)

6. Document ID: JP 11045047 A

L4: Entry 6 of 6

File: JPAB

Feb 16, 1999

PUB-NO: JP411045047A
DOCUMENT-IDENTIFIER: JP 11045047 A
TITLE: MUTUAL UTILIZATION TYPE VIEW LABELING SYSTEM

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Draw. Desc](#) | [Clip Img](#) | [Image](#)

[Generate Collection](#)

Terms	Documents
visible world	6

[Display](#) Documents, starting with Document:

Display Format: [Change Format](#)

Generate Collection**Search Results - Record(s) 1 through 8 of 8 returned.** **1. Document ID: US 6102873 A**

L10: Entry 1 of 8

File: USPT

Aug 15, 2000

US-PAT-NO: 6102873

DOCUMENT-IDENTIFIER: US 6102873 A

TITLE: Identification of stimuli

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KIMC](#) | [Draw Desc](#) | [Image](#) **2. Document ID: US 5936630 A**

L10: Entry 2 of 8

File: USPT

Aug 10, 1999

US-PAT-NO: 5936630

DOCUMENT-IDENTIFIER: US 5936630 A

TITLE: Method of and apparatus for performing perspective transformation of visible stimuli[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KIMC](#) | [Draw Desc](#) | [Image](#) **3. Document ID: US 5684937 A**

L10: Entry 3 of 8

File: USPT

Nov 4, 1997

US-PAT-NO: 5684937

DOCUMENT-IDENTIFIER: US 5684937 A

TITLE: Method and apparatus for performing perspective transformation on visible stimuli[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KIMC](#) | [Draw Desc](#) | [Image](#) **4. Document ID: US 4853854 A**

L10: Entry 4 of 8

File: USPT

Aug 1, 1989

US-PAT-NO: 4853854

DOCUMENT-IDENTIFIER: US 4853854 A

TITLE: Human behavior modification which establishes and generates a user adaptive withdrawal schedule

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KIMC](#) | [Draw Desc](#) | [Image](#)

5. Document ID: US 4403777 A

L10: Entry 5 of 8

File: USPT

Sep 13, 1983

US-PAT-NO: 4403777

DOCUMENT-IDENTIFIER: US 4403777 A

TITLE: Electronic game using phototransducer

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Draw. Desc](#) | [Image](#)

6. Document ID: US 5684937 A

L10: Entry 6 of 8

File: EPAB

Nov 4, 1997

PUB-NO: US005684937A

DOCUMENT-IDENTIFIER: US 5684937 A

TITLE: Method and apparatus for performing perspective transformation on visible stimuli

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Draw. Desc](#) | [Image](#)

7. Document ID: US 5936630 A

L10: Entry 7 of 8

File: DWPI

Aug 10, 1999

DERWENT-ACC-NO: 1999-478254

DERWENT-WEEK: 199940

COPYRIGHT 2000 DERWENT INFORMATION LTD

TITLE: Line data generating system for performing perspective transformation of visible stimuli

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Draw. Desc](#) | [Clip Img](#) | [Image](#)

8. Document ID: US 5684937 A

L10: Entry 8 of 8

File: DWPI

Nov 4, 1997

DERWENT-ACC-NO: 1997-549280

DERWENT-WEEK: 199750

COPYRIGHT 2000 DERWENT INFORMATION LTD

TITLE: Method of perspective transformation of input to resultant visible stimuli for perspective generation system e.g flight simulator - involves differentiating number of rays vn by identifying number of corresponding points as set of first points in visible space, each of rays is specified with respect to reference half plane

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Draw. Desc](#) | [Clip Img](#) | [Image](#)

Generate Collection

Terms	Documents
visible stimuli	8

Display

10

Documents, starting with Document:

8

Display Format:

[Change Format](#)

Freeform Search

Database: US Patents Full-Text Database
 JPO Abstracts Database
 EPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Term:

Display: Documents in Display Format: Starting with Number

Generate: Hit List Hit Count Image

Search History

Today's Date: 9/22/2000

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT,JPAB,EPAB,DWPI,TDBD	14 and 16 and 17	37	<u>L10</u>
USPT,JPAB,EPAB,DWPI,TDBD	13 and 16 and 17	5	<u>L9</u>
USPT,JPAB,EPAB,DWPI,TDBD	antipodal point	16	<u>L8</u>
USPT,JPAB,EPAB,DWPI,TDBD	view angle	4477	<u>L7</u>
USPT,JPAB,EPAB,DWPI,TDBD	focal length	38475	<u>L6</u>
USPT,JPAB,EPAB,DWPI,TDBD	focal lenght	51	<u>L5</u>
USPT,JPAB,EPAB,DWPI,TDBD	sphere	101103	<u>L4</u>
USPT,JPAB,EPAB,DWPI,TDBD	ellipsoid	7536	<u>L3</u>
USPT,JPAB,EPAB,DWPI,TDBD	11 and focal length and view angle	11	<u>L2</u>
DWPI,USPT,EPAB,JPAB,TDBD	rotation and view objects	2250	<u>L1</u>

Generate Collection**Search Results - Record(s) 1 through 10 of 16 returned.** **1. Document ID: US 5902113 A**

L8: Entry 1 of 16

File: USPT

May 11, 1999

US-PAT-NO: 5902113
DOCUMENT-IDENTIFIER: US 5902113 A
TITLE: Map and calculator device

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#) **2. Document ID: US 5541485 A**

L8: Entry 2 of 16

File: USPT

Jul 30, 1996

US-PAT-NO: 5541485
DOCUMENT-IDENTIFIER: US 5541485 A
TITLE: Reactive robotic gripper

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#) **3. Document ID: US 5475802 A**

L8: Entry 3 of 16

File: USPT

Dec 12, 1995

US-PAT-NO: 5475802
DOCUMENT-IDENTIFIER: US 5475802 A
TITLE: Selective polygon map display method

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#) **4. Document ID: US 5341463 A**

L8: Entry 4 of 16

File: USPT

Aug 23, 1994

US-PAT-NO: 5341463
DOCUMENT-IDENTIFIER: US 5341463 A
TITLE: Selective polygon map display method

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#) **5. Document ID: US 5014230 A**

L8: Entry 5 of 16

File: USPT

May 7, 1991

US-PAT-NO: 5014230
DOCUMENT-IDENTIFIER: US 5014230 A
TITLE: Solid-modeling system using topology directed subdivision for determination of surface intersections

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

6. Document ID: US 4967976 A

L8: Entry 6 of 16

File: USPT

Nov 6, 1990

US-PAT-NO: 4967976
DOCUMENT-IDENTIFIER: US 4967976 A
TITLE: Take-up spindle

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

7. Document ID: US 4915833 A

L8: Entry 7 of 16

File: USPT

Apr 10, 1990

US-PAT-NO: 4915833
DOCUMENT-IDENTIFIER: US 4915833 A
TITLE: Column filter using bundles of long fibers

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

8. Document ID: US 4898537 A

L8: Entry 8 of 16

File: USPT

Feb 6, 1990

US-PAT-NO: 4898537
DOCUMENT-IDENTIFIER: US 4898537 A
TITLE: Locating system for maps and other diagrams and displays

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

9. Document ID: US 4890242 A

L8: Entry 9 of 16

File: USPT

Dec 26, 1989

US-PAT-NO: 4890242
DOCUMENT-IDENTIFIER: US 4890242 A
TITLE: Solid-modeling system using topology directed subdivision for determination of surface intersections

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

10. Document ID: US 4886601 A

US-PAT-NO: 4886601

DOCUMENT-IDENTIFIER: US 4886601 A

TITLE: Column filter using bundles of long fibers

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMIC](#) | [Drawl Desc](#) | [Image](#)

[Generate Collection](#)

Terms	Documents
antipodal point	16

[Display](#)

10

Documents, starting with Document:

11

[Display Format:](#)[CIT](#)[Change Format](#)

[Generate Collection](#)**Search Results - Record(s) 11 through 16 of 16 returned.** **11. Document ID: US 4607260 A**

L8: Entry 11 of 16

File: USPT

Aug 19, 1986

US-PAT-NO: 4607260
DOCUMENT-IDENTIFIER: US 4607260 A
TITLE: Asymmetrically configured horn antenna

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Draw Desc](#) | [Image](#) **12. Document ID: US 4497452 A**

L8: Entry 12 of 16

File: USPT

Feb 5, 1985

US-PAT-NO: 4497452
DOCUMENT-IDENTIFIER: US 4497452 A
TITLE: Twin coil strip accumulator

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Draw Desc](#) | [Image](#) **13. Document ID: US 3917932 A**

L8: Entry 13 of 16

File: USPT

Nov 4, 1975

US-PAT-NO: 3917932
DOCUMENT-IDENTIFIER: US 3917932 A
TITLE: Generation of digital functions

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Draw Desc](#) | [Image](#) **14. Document ID: US 3763363 A**

L8: Entry 14 of 16

File: USPT

Oct 2, 1973

US-PAT-NO: 3763363
DOCUMENT-IDENTIFIER: US 3763363 A
TITLE: NUMERICAL CURVE GENERATOR IN A MACHINE TOOL SYSTEM

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Draw Desc](#) | [Image](#) **15. Document ID: US 4497452 A**

L8: Entry 15 of 16

File: EPAB

Feb 5, 1985

PUB-NO: US004497452A
DOCUMENT-IDENTIFIER: US 4497452 A
TITLE: Twin coil strip accumulator

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Clip Img](#) | [Image](#)

16. Document ID: US 4497452 A

L8: Entry 16 of 16

File: DWPI

Feb 5, 1985

DERWENT-ACC-NO: 1985-049662

DERWENT-WEEK: 198508

COPYRIGHT 2000 DERWENT INFORMATION LTD

TITLE: Twin coil strip steel accumulator - has adjacent spiral coils rotating on common axis with strip guides to curve them

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#)

[Generate Collection](#)

Terms	Documents
antipodal point	16

[Display](#)

10

Documents, starting with Document: 16

Display Format: [CIT](#) [Change Format](#)

[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)**Search Results -**[Terms](#)[Documents](#)

11 and focal length and view angle

11

Database:

US Patents Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

[Refine Search:](#)[Clear](#)**Search History****Today's Date: 9/22/2000**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT,JPAB,EPAB,DWPI,TDBD	11 and focal length and view angle	11	<u>L2</u>
DWPI,USPT,EPAB,JPAB,TDBD	rotation and view objects	2250	<u>L1</u>

Generate Collection**Search Results - Record(s) 1 through 10 of 11 returned.** **1. Document ID: US 6084979 A**

L2: Entry 1 of 11

File: USPT

Jul 4, 2000

US-PAT-NO: 6084979

DOCUMENT-IDENTIFIER: US 6084979 A

TITLE: Method for creating virtual reality

DATE-ISSUED: July 4, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kanade; Takeo	Pittsburgh	PA	N/A	N/A
Narayanan; P. J.	Calicut Kerala	N/A	N/A	INX
Rander; Peter W.	Pittsburgh	PA	N/A	N/A

US-CL-CURRENT: 382/154, 345/424, 345/425, 348/48, 382/285[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **2. Document ID: US 5973700 A**

L2: Entry 2 of 11

File: USPT

Oct 26, 1999

US-PAT-NO: 5973700

DOCUMENT-IDENTIFIER: US 5973700 A

TITLE: Method and apparatus for optimizing the resolution of images which have an apparent depth

DATE-ISSUED: October 26, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Taylor; Roy Y.	Scottsville	NY	N/A	N/A
Morton; Roger A.	Penfield	NY	N/A	N/A

US-CL-CURRENT: 345/427[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **3. Document ID: US 5886735 A**

L2: Entry 3 of 11

File: USPT

Mar 23, 1999

US-PAT-NO: 5886735
DOCUMENT-IDENTIFIER: US 5886735 A

TITLE: Video telephone headset

DATE-ISSUED: March 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bullister; Edward T	Newton	MA	02162	N/A

US-CL-CURRENT: 348/20; 348/14, 348/373

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#) | [Image](#)

4. Document ID: US 5811784 A

L2: Entry 4 of 11

File: USPT

Sep 22, 1998

US-PAT-NO: 5811784

DOCUMENT-IDENTIFIER: US 5811784 A

TITLE: Extended working range dataform reader

DATE-ISSUED: September 22, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tausch; Mark	Westchester	OH	N/A	N/A
Wang; Ynjiun P.	Ft. Myers	FL	N/A	N/A
O'Hagan; Timothy P.	Ft. Myers	FL	N/A	N/A

US-CL-CURRENT: 235/472.01; 235/462.01

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#) | [Image](#)

5. Document ID: US 5712731 A

L2: Entry 5 of 11

File: USPT

Jan 27, 1998

US-PAT-NO: 5712731

DOCUMENT-IDENTIFIER: US 5712731 A

TITLE: Security device for security documents such as bank notes and credit cards

DATE-ISSUED: January 27, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Drinkwater; Kenneth J.	Surrey	N/A	N/A	GBX
Hudson; Philip M. G.	Wiltshire	N/A	N/A	GBX

US-CL-CURRENT: 359/619; 359/622, 359/623

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#) | [Image](#)

6. Document ID: US 5678910 A

E: Multiple angle projection for 3-D imagery

DATE-ISSUED: October 21, 1997

INVENTOR-INFORMATION:

NAME

Martin; Donald Lewis Maunsell

CITY

Mosman

STATE

N/A

ZIP CODE

N/A

COUNTRY

AUX

US-CL-CURRENT: 353/7; 353/10, 359/478

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KM/C	Draw. Desc	Image
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	------------	-------

7. Document ID: US 5668631 A

L2: Entry 7 of 11

File: USPT

Sep 16, 1997

US-PAT-NO: 5668631

DOCUMENT-IDENTIFIER: US 5668631 A

TITLE: Measuring system with improved method of reading image data of an object

DATE-ISSUED: September 16, 1997

INVENTOR-INFORMATION:

NAME

Horita; Toshio

CITY

Mishima-Gun

STATE

N/A

ZIP CODE

N/A

COUNTRY

JPX

Yagi; Fumiya

Ibaraki

N/A

N/A

JPX

Hirose; Satoru

Tondabayashi

N/A

N/A

JPX

US-CL-CURRENT: 356/376; 250/559.22, 359/213

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KM/C	Draw. Desc	Image
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	------------	-------

8. Document ID: US 5592575 A

L2: Entry 8 of 11

File: USPT

Jan 7, 1997

US-PAT-NO: 5592575

DOCUMENT-IDENTIFIER: US 5592575 A

TITLE: Apparatus for recording image signal controllable in two modes of operation

DATE-ISSUED: January 7, 1997

INVENTOR-INFORMATION:

NAME

Nakazato; Saburo

CITY

Yokohama

STATE

N/I

ZIP CODE

N/A

COUNTRY

JPX

US-CL-CURRENT: 382/312; 348/231, 358/909.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KM/C	Draw. Desc	Image
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	------------	-------

9. Document ID: US 5052789 A

L2: Entry 9 of 11

File: USPT

Oct 1, 1991

US-PAT-NO: 5052789

DOCUMENT-IDENTIFIER: US 5052789 A

TITLE: Multi-user microscope with orientation adjustment and method

DATE-ISSUED: October 1, 1991

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kleinberg; Larry K.	Toluca	CA	N/A	N/A

US-CL-CURRENT: 359/375; 359/377, 359/379

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KIMC](#) | [Drawn Desc](#) | [Image](#)

10. Document ID: US 4486076 A

L2: Entry 10 of 11

File: USPT

Dec 4, 1984

US-PAT-NO: 4486076

DOCUMENT-IDENTIFIER: US 4486076 A

TITLE: Real time stereo imaging

DATE-ISSUED: December 4, 1984

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Taenzer; Jon C.	Palo Alto	CA	N/A	N/A

US-CL-CURRENT: 359/464; 128/916, 359/233

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KIMC](#) | [Drawn Desc](#) | [Image](#)

[Generate Collection](#)

Terms	Documents
11 and focal length and view angle	11

[Display](#)

[10](#)

Documents, starting with Document:

[11](#)

[Display Format:](#) [CIT](#) [Change Format](#)

Generate Collection**Search Results - Record(s) 11 through 11 of 11 returned.** **11. Document ID: US 3878329 A**

L2: Entry 11 of 11

File: USPT

Apr 15, 1975

US-PAT-NO: 3878329

DOCUMENT-IDENTIFIER: US 3878329 A

TITLE: ORTHOSCOPIC IMAGE TUBE

DATE-ISSUED: April 15, 1975

INVENTOR- INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brown, Kenneth A.	Saugus	CA	N/A	N/A

US-CL-CURRENT: 348/51, 313/442, 315/368.12, 345/10, 348/359, 359/619, 385/120**[Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KIMC | Draw. Descr | Image]****Generate Collection**

Terms	Documents
11 and focal length and view angle	11

Display**10**Documents, starting with Document: **11****Display Format:****CIT****Change Format**

Help **Logout** **Interrupt****Main Menu** | **Search Form** | **Posting Counts** | **Show S Numbers** | **Edit S Numbers** | **Preferences****Search Results -**

Terms	Documents
l3 and focal length	9

Database: US Patents Full-Text DatabaseJPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins**Refine Search:**

13 and focal length

Clear**Search History****Today's Date:** 9/22/2000

DB Name	Query	Hit Count	Set Name
USPT,JPAB,EPAB,DWPI,TDBD	l3 and focal length	9	<u>L4</u>
USPT,JPAB,EPAB,DWPI,TDBD	l2 and rotate	55	<u>L3</u>
DWPI,USPT,EPAB,JPAB,TDBD	texture mapping and 3d and inside and point	147	<u>L2</u>
DWPI,USPT,EPAB,JPAB,TDBD	((473/330)!.CCLS.)	146	<u>L1</u>

Generate Collection**Search Results - Record(s) 1 through 9 of 9 returned.** **1. Document ID: US 6100862 A**

L4: Entry 1 of 9

File: USPT

Aug 8, 2000

US-PAT-NO: 6100862

DOCUMENT-IDENTIFIER: US 6100862 A

TITLE: Multi-planar volumetric display system and method of operation

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **2. Document ID: US 6097854 A**

L4: Entry 2 of 9

File: USPT

Aug 1, 2000

US-PAT-NO: 6097854

DOCUMENT-IDENTIFIER: US 6097854 A

TITLE: Image mosaic construction system and apparatus with patch-based alignment, global block adjustment and pair-wise motion-based local warping

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **3. Document ID: US 6097394 A**

L4: Entry 3 of 9

File: USPT

Aug 1, 2000

US-PAT-NO: 6097394

DOCUMENT-IDENTIFIER: US 6097394 A

TITLE: Method and system for light field rendering

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **4. Document ID: US 6028955 A**

L4: Entry 4 of 9

File: USPT

Feb 22, 2000

US-PAT-NO: 6028955

DOCUMENT-IDENTIFIER: US 6028955 A

TITLE: Determining a vantage point of an image[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **5. Document ID: US 6023523 A**

L4: Entry 5 of 9

File: USPT

Feb 8, 2000

Terms	Documents
l3 and focal length	9

Display

10 Documents, starting with Document: 9

Display Format:

5. Document ID: US 5905499 A

L5: Entry 5 of 15

File: USPT

May 18, 1999

US-PAT-NO: 5905499

DOCUMENT-IDENTIFIER: US 5905499 A

TITLE: Method and system for high performance computer-generated virtual environments

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

6. Document ID: US 5886701 A

L5: Entry 6 of 15

File: USPT

Mar 23, 1999

US-PAT-NO: 5886701

DOCUMENT-IDENTIFIER: US 5886701 A

TITLE: Graphics rendering device and method for operating same

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

7. Document ID: US 5872902 A

L5: Entry 7 of 15

File: USPT

Feb 16, 1999

US-PAT-NO: 5872902

DOCUMENT-IDENTIFIER: US 5872902 A

TITLE: Method and apparatus for rendering of fractional pixel lists for anti-aliasing and transparency

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

8. Document ID: US 5870097 A

L5: Entry 8 of 15

File: USPT

Feb 9, 1999

US-PAT-NO: 5870097

DOCUMENT-IDENTIFIER: US 5870097 A

TITLE: Method and system for improving shadowing in a graphics rendering system

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

9. Document ID: US 5867166 A

L5: Entry 9 of 15

File: USPT

Feb 2, 1999

US-PAT-NO: 5867166

DOCUMENT-IDENTIFIER: US 5867166 A

TITLE: Method and system for generating images using Gsprites

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#) | [Image](#)

10. Document ID: US 5864342 A

L5: Entry 10 of 15

File: USPT

Jan 26, 1999

US-PAT-NO: 5864342

DOCUMENT-IDENTIFIER: US 5864342 A

TITLE: Method and system for rendering graphical objects to image chunks

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KIMC](#) | [Draw Desc](#) | [Image](#)

[Generate Collection](#)

Terms	Documents
14 and view point	15

[Display](#)

[10](#) Documents, starting with Document: [11](#)

[Display Format:](#) [TI](#) [Change Format](#)

Generate Collection**Search Results - Record(s) 1 through 10 of 15 returned.** **1. Document ID: US 6111582 A**

L5: Entry 1 of 15

File: USPT

Aug 29, 2000

US-PAT-NO: 6111582

DOCUMENT-IDENTIFIER: US 6111582 A

TITLE: System and method of image generation and encoding using primitive reprojection[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **2. Document ID: US 6008820 A**

L5: Entry 2 of 15

File: USPT

Dec 28, 1999

US-PAT-NO: 6008820

DOCUMENT-IDENTIFIER: US 6008820 A

TITLE: Processor for controlling the display of rendered image layers and method for controlling same[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **3. Document ID: US 5999189 A**

L5: Entry 3 of 15

File: USPT

Dec 7, 1999

US-PAT-NO: 5999189

DOCUMENT-IDENTIFIER: US 5999189 A

TITLE: Image compression to reduce pixel and texture memory requirements in a real-time image generator[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#) **4. Document ID: US 5999187 A**

L5: Entry 4 of 15

File: USPT

Dec 7, 1999

US-PAT-NO: 5999187

DOCUMENT-IDENTIFIER: US 5999187 A

TITLE: Fly-through computer aided design method and apparatus

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Draw Desc](#) | [Image](#)



We won't judge
your questions...



This site is brou
EarthWeb

Earth

An
EARTHWEB
Resource

HOME SUBSCRIBE SEARCH FAQ SITEMAP CONTACT US

Friday, September 22, 2

IT KNOWLEDGE.COMSM
Need IT. Find IT. Know IT.

Enterprise Subscription
IT KNOWLEDGE.COM

KEYWORD SEARCH

GO!

Found 31 Resources (48 pages) for: computer graphic and surface and point and inside
6 Displayed per page.

Sort by: Relevance Pub Date

Page: 1 2 3 4 5 6

O
O
E
I

PUBLICATION LOOKUP

GO!

Title



A+: Core Module Study Guide, Second Edition
by David Groth
Sybex, Inc.

ISBN: 0782123449 Pub Date: 1998/07/01

[Table of Contents](#)

[Synopsis](#)

<http://corpitk.earthweb.com/reference/pro/0782123449/appendix-b.html> • highlighted

JUMP TO TOPIC

Please Select



Inside 3D Studio MAX 2 Volume III: Animation
by George Maestri
Macmillan Computer Publishing

ISBN: 1562058657 Pub Date: 1998/06/02

[Table of Contents](#)

[Synopsis](#)

<http://corpitk.earthweb.com/reference/pro/1562058657/ch12/477-481.html> • highlighted
<http://corpitk.earthweb.com/reference/pro/1562058657/ch12/481-484.html> • highlighted

Desktop Library

Click to access!



Inside 3D Studio MAX 2 Volume II: Modeling, Materials
by Ted Boardman
Macmillan Computer Publishing

ISBN: 1562058649 Pub Date: 1998/04/17

[Table of Contents](#)

[Synopsis](#)

<http://corpitk.earthweb.com/reference/pro/1562058649/ch09/301-306.html> • highlighted



Web Developer's Marketplace: The Definitive Guide to the Web Development Industry
by Dan and Judith Wesley
The Coriolis Group

ISBN: 1576101789 Pub Date: 1998/02/01

[Table of Contents](#)

[Synopsis](#)

<http://corpitk.earthweb.com/reference/pro/1576101789/ch23/23-06.html> • highlighted

3D Studio MAX 2 Fundamentals*by Michael Peterson*

Macmillan Computer Publishing

ISBN: 1562058398 **Pub Date: 1998/01/01**[Table of Contents](#)[Synopsis](#)<http://corpitk.earthweb.com/reference/pro/1562058398/glossary.html> • highlighted**HTML 4 Unleashed, Professional Reference Edition***by Rick Darnell*

Macmillan Computer Publishing

ISBN: 157521380x **Pub Date: 1998/01/01**[Table of Contents](#)[Synopsis](#)<http://corpitk.earthweb.com/reference/pro/157521380x/appendix-q.html> • highlightedPage: 1 2 3 4 5 6[HOME](#)[SUBSCRIBE](#)[SEARCH](#)[FAQ](#)[SITEMAP](#)[CONTACT US](#)



Using Visual C++ 6
by *Jonathan Bates; Timothy Tompkins*
Macmillan Computer Publishing

ISBN: 0789716356 **Pub Date: 1998/07/31**

[Table of Contents](#)

[Synopsis](#)

<http://corpkit.earthweb.com/reference/pro/0789716356/ch28/750-753.html> · highlighted



The Image Processing Handbook, Third Edition
by *John C. Russ*
CRC Press LLC

ISBN: 0849325323 **Pub Date: 1998/07/01**

[Table of Contents](#)

[Synopsis](#)

<http://corpkit.earthweb.com/reference/pro/0849325323/ch10/654-658.html> · highlighted

Page: 1 2 3 4 5 6

[HOME](#) [SUBSCRIBE](#) [SEARCH](#) [FAQ](#) [SITEMAP](#) [CONTACT US](#)

ITKNOWLEDGE.COMSM

Need IT. Find IT. Know IT.

Enterprise Subscription
ITKNOWLEDGE.COM

KEYWORD SEARCH

GO!

Found 31 Resources (48 pages) for: computer graphic and surface and point and inside
6 Displayed per page.

Sort by: Relevance Pub Date

○

○

■

Page: 1 2 3 4 5 6



The Network Press Encyclopedia of Networking Third Edition

by Werner Feibel
Sybex, Inc.

ISBN: 0782122558 Pub Date: 1999/11/01

[Table of Contents](#)

[Synopsis](#)

PUBLICATION LOOKUP

GO!

Title



Data and Telecommunications Dictionary

by Julie K. Petersen
CRC Press LLC

ISBN: 0849395917 Pub Date: 1999/02/26

[Table of Contents](#)

[Synopsis](#)

Desktop Library

Click to access!



VM/ESA Network Computing with Java and NetRexx

by IBM Redbooks
IBM Corporation

ISBN: 0738410349 Pub Date: 1998/11/19

[Table of Contents](#)

[Synopsis](#)



From Multiplatform Operational Data to Data Warehousing and Business

Intelligence
by IBM Redbooks
IBM Corporation

ISBN: 0738400327 Pub Date: 1998/08/03

[Table of Contents](#)

[Synopsis](#)



An
EARTHWEB
Resource

**Tech
Crawler.com**

The Super Search Engine for IT Pros
Only From EarthWeb

Development Tools

GO

This site is brought to
you by
EARTHWEB

[HOME](#) [SUBSCRIBE](#) [SEARCH](#) [FAQ](#) [SITEMAP](#) [CONTACT US](#)

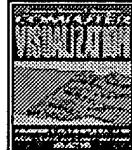
IT KNOWLEDGE.COM SM

Need IT. Find IT. Know IT.

Friday, September 22, 2000

► **KEYWORD SEARCH**

GO!



Computer Visualization: Graphics Techniques for Engineering and Scientific Analysis

by Richard S. Gallagher, Solomon Press

CRC Press, CRC Press LLC

ISBN: 0849390508 Pub Date: 12/22/94

► **PUBLICATION LOOKUP**

GO!

Title **▼**

Search this book:

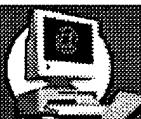
GO!

Preface

Acknowledgments

► **JUMP TO TOPIC**

Please Select **▼**



Desktop Library

Click to access!

SECTION I—Introduction

Chapter 1—Scientific Visualization: An Engineering Perspective

1.1 Introduction

1.2 A Look at Computer Aided Engineering

1.3 A Brief History of Computer Aided Engineering

1.3.1 Computational Methods for Analysis

1.3.2 Computer Graphics and Visualization

1.4 The Process of Analysis and Visualization

1.5 The Impact of Visualization in Engineering Design

1.6 Trends in Visualization Environments for Analysis

1.7 Summary

1.8 References

Chapter 2—An Overview of Computer Graphics for Visualization

2.1 What is Computer Graphics?

2.2 Why Computer Graphics?

2.3 Traditional Picture Making

2.4 The Graphics Process

2.5 Historical Connections

2.6 The Modern Era

2.7 Models

2.8 Transformations

2.9 Display

2.9.1 Shading

<u>2.9.2 Texture Mapping</u>
<u>2.10 Visibility</u>
<u>2.11 Pixel Driven Rendering</u>
<u>2.11.1 Ray-Tracing</u>
<u>2.11.2 Voxel-Based Rendering</u>
<u>2.12 Architecture of Display Systems</u>
<u>2.13 Further Reading</u>

SECTION II—Scientific Visualization Techniques

Chapter 3—Analysis Data for Visualization

<u>3.1 Introduction</u>
<u>3.2 Numerical Analysis Techniques</u>
<u>3.3 Brief Overview of Element Based Discretization Techniques</u>
<u>3.3.1 Commonly Used Element Geometry and Shape Functions</u>
<u>3.3.2 Element Integration</u>
<u>3.4 Methods to Construct and Control Element Meshes</u>
<u>3.4.1 Mesh Generation</u>
<u>3.4.2 Adaptive Finite Element Mesh Control</u>
<u>3.5 Visualization Goals</u>
<u>3.5.1 Goals of Visualizing Results</u>
<u>3.5.2 Types of Analysis Variables to be Visualized</u>
<u>3.6 Representation of Mesh and Results Data</u>
<u>3.6.1 Mesh Geometry</u>
<u>3.6.2 Data Representation</u>
<u>3.7 Mapping Analysis Results to Visualizations</u>
<u>3.7.1 Extrapolation and Interpolation</u>
<u>3.7.2 Mapping to Visualization Forms</u>
<u>3.8 Summary</u>
<u>3.9 Appendix: Construction and Discretization of Weak Form of the Governing Equations</u>
<u>3.10 References</u>

Chapter 4—Scalar Visualization Techniques

<u>4.1 Introduction</u>
<u>4.2 One-Dimensional Scalar Fields</u>
<u>4.3 Two-Dimensional Scalar Fields</u>
<u>4.3.1 Element Face Color Coding</u>
<u>4.3.2 Contour Display</u>
<u>4.3.3 Direct Color Interpolation of Scalar Results</u>
<u>4.4 Three-Dimensional Scalar Fields</u>
<u>4.4.1 Isosurface Techniques</u>
<u>4.4.2 Particle Sampling and Implicit Isosurfaces</u>
<u>4.4.3 Volume Slicing</u>
<u>4.5 Summary</u>
<u>4.6 References</u>

Chapter 5—A Unified Framework for Flow Visualization

<u>5.1 Introduction</u>
<u>5.1.1 Flow Data</u>
<u>5.1.2 The Visualization Process</u>
<u>5.1.3 Chapter Content</u>
<u>5.2 Visualization Mappings of Flow Data</u>
<u>5.2.1 Icons</u>

5.2.2 Attributes of Icons

5.3 Vector Mappings

5.3.1 Elementary Icons

5.3.1.1 Point icons

5.3.1.2 Particle traces, streaklines, and streamlines

5.3.1.3 Streamsurfaces

5.3.2 Local icons

5.3.2.1 Critical points and their glyphs

5.3.2.2 Streamribbons and streamtubes

5.3.3 Global Icons

5.3.3.1 2-D Vector field topology

5.3.3.2 2-D Time-dependent vector field topology

5.3.3.3 3-D separated flows

5.4 Tensor Mappings

5.4.1 Elementary Icons

5.4.1.1 Point icons

5.4.1.2 Hyperstreamlines

5.4.2 Global Icons

5.5 Conclusions

5.6 Appendix: Software Environments for Flow Visualization

5.6 Acknowledgements

5.7 References

Chapter 6—Continuum Volume Display

6.1 Introduction

6.2 Volume Rendering Terminology

6.3 Surface Rendering Techniques

6.4 Volume Rendering Techniques

6.4.1 Object-Order Techniques

6.4.2 Image-Order Techniques

6.4.3 Hybrid Techniques

6.5 Volume Rendering Optimizations

6.6 Conclusions

6.7 References

Chapter 7—Animation and the Examination of Behavior Over Time

7.1 Introduction

7.1.1 Animation as an Educational and Analysis Tool

7.2 Designing Animations

7.2.1 Animation Control

7.2.1.1 Algorithmic animation control

7.2.1.2 Key frame animation control

7.2.2 Parameters to Animate

7.2.2.1 Animating the data

7.2.2.2 Animating visualization techniques

7.2.2.3 Animating the view

7.2.3 Assembling a Complete Animation

7.2.3.1 Frame rate

7.2.3.2 Sequences and transitions

7.2.3.3 Titles and text

7.2.3.4 Narration

7.2.3.5 Sonification

7.2.3.6 Music

7.3 Producing Animations

7.3.1 Animating Online

7.3.1.1 Direct display

7.3.1.2 Display list animation

7.3.1.3 Pencil tests

7.3.1.4 Image animation

7.3.1.5 Color table animation

7.3.2 Animating Offline

7.3.2.1 Video recording

7.3.2.2 Film

7.3.2.3 Compact discs

7.3.2.4 Videodiscs

7.3.2.5 Multimedia and interaction

7.4 Conclusions

7.5 References

SECTION III—Applications Issues and Future Trends

Chapter 8—Systems Aspects of Visualization Applications

8.1 Introduction

8.2 System Architecture

8.2.1 Turnkey Systems

8.2.2 Visual Programming Application Builders

8.2.3 Application Builders Using a Language Interface

8.3 User Interfaces

8.3.1 Command Language Interfaces

8.3.2 Graphical Interfaces

8.4 Data Management

8.4.1 Databases

8.4.2 Data Model

8.4.3 Internal Data Management

8.4.4 Data Reduction

8.5 Graphics Systems

8.5.1 Graphics Database Manager

8.5.2 View Manager

8.5.3 User Interface

8.5.4 Graphics Applications Programming Interface

8.6 Interactive Data Exploration

8.6.1 Probes

8.6.2 Calculators

8.6.3 Graphing

8.6.4 Color Manipulation

8.6.5 Quantification of Phenomena

8.7 Parallel and Distributed Visualization

8.7.1 Parallel Computation

8.7.2 Distributed Computation

8.8 Visualization Systems

8.8.1 Libraries

8.8.2 Turnkey Systems

8.8.3 Application Builders

8.9 References

Chapter 9—Applications of Engineering Visualization to Analysis and Design

-File 16:Gale Group PROMT 1990-2000/Sep 25
(c) 2000 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2000/Sep 26
(c) 2000 The Gale Group
File 621:Gale Group New Prod.Annou.(R) 1985-2000/Sep 26
(c) 2000 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2000/Sep 26
(c) 2000 The Gale Group
File 88:Gale Group Business A.R.T.S. 1976-2000/Sep 26
(c) 2000 The Gale Group
File 275:Gale Group Computer DB(TM) 1983-2000/Sep 26
(c) 2000 The Gale Group

Set	Items	Description
S1	58	P() (SURFACE? OR SPHERE? OR PLANE? ?) OR PSURFACE? OR PSPHERE?
S2	180892	VIEWPOINT? OR VIEW(1N)POINT? ? OR DIRECTION(1W)VIEW? ?
S3	8986	(TEXTURE? OR TEXEL?) (5N) (MAP? ? OR MAPP? OR APPLICATION? OR APPLY?)
S4	24184	(FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?) (3N) SURROUND? OR WRAP? () AROUND OR (IMMERS???? OR ENVELOP?) (5N) (SCENE? OR IMAGE? OR DATA OR PICTURE? OR GRAPHIC? ? OR SPACE)
S5	175	SAMPL? (5N) (VISIBLE OR VIRTUAL OR DIGITAL) (3N) (WORLD? OR SPACE OR ENVIRON?)
S6	791305	S1 OR SURFACE? OR PLANE OR PLANES OR SPHERE?
S7	0	S6(S)S2(S)S3(S) (S4 OR S5)
S8	3	S2(S)S3(S) (S4 OR S5)
S9	2	RD (unique items)
S10	34	S6(S)S2(S) (S3 OR S4 OR S5)
S11	20	RD (unique items)
S12	20	S11 NOT S8
S13	72	S3(S) (S4 OR S5)
S14	24	S13(S)S6
S15	16	RD (unique items)
S16	16	S15 NOT (S8 OR S11)
?		

9/3,K/1 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

07964815 SUPPLIER NUMBER: 17183564 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Walk-through realism slashes development time. (virtual reality equipment) (includes related articles)
Teschler, Leland
Machine Design, v67, n10, p60(6)
May 25, 1995
ISSN: 0024-9114 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2741 LINE COUNT: 00225

... six-degree-of-freedom mouse or other cursor controller, authoring software for building models, and run-time software for, among other things, calculating perspectives and **view points** in real time as the viewer walks through **scenes** .

Division Inc.'s fully **immersive** turnkey system gives an idea of the hardware that high-end VR demands. The U.K. company was among the first to apply VR techniques...

9/3,K/2 (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

07584941 SUPPLIER NUMBER: 16173732 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Virtual science. (use of virtual reality in study of science and medicine)
Phillips Mahoney, Diana
Computer Graphics World, v17, n7, p20(5)
July, 1994
ISSN: 0271-4159 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3148 LINE COUNT: 00251

... describing various structures and locations as the viewer approaches them. The simulation runs on an SGI RealityEngine, which allows the real-time display of the **texture -mapped images** .

The sense of **immersion** into the heart is hindered a bit by the limitations of the technology, says McGovern. "It's fully immersive in the sense that, if you..."

12/3,K/1 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2000 The Gale Group. All rts. reserv.

07786546 Supplier Number: 64687909 (USE FORMAT 7 FOR FULLTEXT)

Unreal Virtual Reality. (Technology Information)

MAHONEY, DIANA PHILLIPS

Computer Graphics World, v23, n8, p15

August, 2000

Language: English Record Type: Fulltext Abstract

Document Type: Magazine/Journal; Trade

Word Count: 1155

... computational workhorses, paving the way for real-time interaction during the run-time phase. For the latter, the system loads all of the filtered MIP-map levels for all **surfaces** into **texture** memory at start-up and employs an OpenGL-based **texture -mapping application**, which draws **surfaces** of the 3D model using the pre-loaded data for every novel **viewpoint**.

The nonphotorealistic VR system was developed primarily as a proof-of-concept application, says Klein. "What we've said with it is, 'Hey, it can...'"

12/3,K/2 (Item 2 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2000 The Gale Group. All rts. reserv.

07185881 Supplier Number: 61376280 (USE FORMAT 7 FOR FULLTEXT)

REALVIZ S.A. Announces ImageModeler For Building Photo-Real 3D Models From Still Images.

PR Newswire, p2398

April 7, 2000

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 717

... features high-end production and editing tools that are specifically designed for professional production needs.

Using ImageModeler

An object is filmed or photographed from different **viewpoints**. The images are digitized and imported into ImageModeler. All images are displayed within the ImageModeler interface, and the user selects a few corresponding points on...

...displays a polygonal mesh that may be edited by the user. Finally, a combination of the original digital images are attached to the model's **surfaces** as **texture maps**. The resulting model can be exported to any third party compositing, animation or CAD software for further enhancement and animation.

Integration with REALVIZ' Image Processing...

12/3,K/3 (Item 3 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2000 The Gale Group. All rts. reserv.

06429567 Supplier Number: 54960267 (USE FORMAT 7 FOR FULLTEXT)

A Concise Review of 3D Technology : What We Mean by What We Say About What 3D Chips Do. (Technology Information)

Microprocessor Report, v13, n8, pNA

June 21, 1999

Language: English Record Type: Fulltext

Document Type: Newsletter; Refereed; Trade

Word Count: 3548

... Trilinear filtering can be further improved by changing the shape

of the filter window according to the effective "footprint" of the screen pixel on each **texture map**. Figure 5 illustrates this technique, called anisotropic filtering. For an object **surface** at a 66 angle to the **view point**, a typical anisotropic filter uses 10 **texture** samples from each **MIP-map** level and requires five times the bandwidth and computation needed for bilinear filtering.

Texture maps may also be used to describe changes in the location...

12/3,K/4 (Item 4 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2000 The Gale Group. All rts. reserv.

05721609 Supplier Number: 50196567 (USE FORMAT 7 FOR FULLTEXT)

Gadzooks! It's Godzilla

Robertson, Barbara
Computer Graphics World, p49
July, 1998
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1780

... as Centropolis that want to customize Softimage 3D. Among the tools created for Godzilla is one that allows weights assigned to a vertex on the **surface** of a model to be copied, saved, and mapped onto a different version of the model and a texture-projection tool that makes it easy to **texture -map** an object from a user-defined camera **point of view**. Both of these tools have already been added to version 3.8 of Softimage 3D, according to Morin. In addition, Special Projects' Olivier Ozoux worked...

12/3,K/5 (Item 5 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2000 The Gale Group. All rts. reserv.

04780470 Supplier Number: 47036435 (USE FORMAT 7 FOR FULLTEXT)

InWorld's J3D 3D API for Java Developers.

Business Wire, p01140105
Jan 14, 1997
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 381

... even beginning Java programmers can start building 3D worlds in no time.

Features include:

- Flat shaded, wireframe or mixed rendering modes (Future versions will support **texture mapping**).
- Z sorted sprites/animations/decals.
- Native 24-bit color.
- Hierarchical attachments and Pivot **Points**.
- World, **View**, Local translation and rotation.
- Ability to build and modify geometry in real-time.
- Built in Terrain Following Functions.
- Simple and Complex Collision Detection.
- Programmable Hither/Yon **planes**.
- Multiple 3D Clipping and Sorting Algorithms.
- Ability to 'Unwrap' the rendering Pipeline.
- Access to All Image Buffers.
- Multiple Lighting.
- Gradient Skies, Horizon **planes**.
- 2D-3D Screen to Object Picking.
- Multitude of stock 3D Objects.

J3D's interface is easily extended. The package includes dozens of code examples showing...

12/3,K/6 (Item 6 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2000 The Gale Group. All rts. reserv.

04480389 Supplier Number: 46577450 (USE FORMAT 7 FOR FULLTEXT)

Fractal Design Unveils Detailer
News Release, pN/A
July 29, 1996

Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1217

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...Digital imaging leader Fractal Design Corporation (NASDAQ: FRAC) today announced Fractal Design Detailer, a stunning new graphics application that allows users to paint on the **surface** of 3D models in real-time. For 3D artists, Detailer provides the easiest, most productive way to create bump and **texture maps** for objects and characters used in 3D animations. For print and multimedia designers, Detailer bridges the gap between 2D and 3D, allowing users to readily...

...those produced with Fractal's own Ray Dream Studio or Ray Dream Designer, or using any of Detailer's built-in 3D primitives such as **spheres**, blocks and cones. Once imported, models can be given color by creating **Texture maps**; relief by making Bump **maps**; shininess, reflectivity or glow by using Highlight, Reflection or Glow maps. These maps can be imported paintings and photographs in any resolution (including Photoshop layer...).

...of the many design activities within 3D modeling, rendering and animation, few areas are as time-intensive as the design and application of convincingly realistic **surfaces**. And yet, since convincingly realistic **surfaces** distinguish realistic renderings from those which smack of an ersatz, plastic look, experienced 3D designers have had little choice until now but to take the...

...element that's part of my 2D composition," he said. "I have the painting tools I'm used to, but they work right on the **surface** of the object I'm illustrating, so I can achieve incredible accuracy. Detailer is the close thing to actually holding an object and painting it." Content Detailer is delivered on a CD-ROM with over 100 **surface** textures, over 100 seamless patterns, 120 cool photos, an assortment of 3D models including some created by **Viewpoint** Datalabs, and over 100 different brushes. As a special promotion, individuals who purchase Detailer before December 31, 1996 will also receive a free copy of...

...Dream Designer 4.1. Designer can be used to create sophisticated models for use in Fractal Design Detailer. Key Features 3D Maps * Paint on multiple **maps** including: Bump, **Texture** (color), Reflection, Glow, and Highlight. Paint maps in either 2D or 3D views. * Resize maps, change canvas size, selectively show or hide maps. *.Direct support...

...Burn, Liquid brushes, Water Color, Artists brushes, Smudging brushes. * Image Hose brush lets users paint with discreet image elements. * Over 20 image-editing effects including **Apply Surface Textures**, Color Overlay, Blur, Sharpen, High-Pass and Glass Distortion. * Support for Photoshop-compatible plug-in filters, acquire and export modules. Import/Export * 3D: Import and...

12/3,K/7 (Item 7 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2000 The Gale Group. All rts. reserv.

01753186 Supplier Number: 42197753 (USE FORMAT 7 FOR FULLTEXT)

Making a scene

Flight International, p44
July 2, 1991

Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 2399

... processing transforms display-screen co-ordinates into real-world co-ordinates - searching memory to find out what should beat the pixel.

VISTAR distinguishes between terrain **maps** and runway marking **maps**, adding **texture** and basic colour for each display pixel, which is further

modulated. Each **surface** element is held in memory as a **plan** view. It can be processed to appear rotated, inverted or angled off against the desired **viewpoint**.

Resolution is limited only by the size of the individual relevant memory; the level is chosen by the position of a range of bits within...

12/3,K/8 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

02305724

AT&T today announced that its **PXM 900 Series**, a specialized supercomputer dedicated to three dimensional color graphics and image processing, is now compatible

News Release July 10, 1989 p. 1

... including points, lines, arcs and polygons o shade objects using a variety of techniques -- all with depth cueing for various levels of image realism o **texture map** images over three dimensional objects and **surfaces** o define completely rendered objects as templates in order to rapidly redraw frequently used objects o apply up to 150 different light sources o change **view point** and **view** direction o antialias for smooth lines and polygons

...

12/3,K/9 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

09309478 SUPPLIER NUMBER: 19042642 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Spring 1997: the countdown begins. (the announcement of spring books for 1997 is introduced, as emphasis on the approaching millennium is becoming a more prevalent topic throughout the various categories) (Brief Article)
Publishers Weekly, v244, n3, p279(1)

Jan 20, 1997

DOCUMENT TYPE: Brief Article ISSN: 0000-0019 LANGUAGE: English

RECORD TYPE: Fulltext

WORD COUNT: 99948 LINE COUNT: 08312

... at the "Disneyfication" of architecture.
NORTH LIGHT BOOKS

Acrylic Decorative Painting Techniques (Mar., \$24.99) by Sybil Edwards provides instruction for successful results.

Painting Wildlife **Textures** Step by Step (Mar., \$29.99) by Rod Lawrence demonstrates.

PBC INTERNATIONAL

Timeless Design (Aug., \$34.95) by Bo Niles features rooms that are never...get a job. Advertising.

Both Ends of the Night (July, \$23) by Marcia Muller. PI Sharon McCone's former flight instructor dies in a suspicious **plane** crash. 50,000 first printing Advertising.

Killer Market (Aug., \$22) by Margaret Maron. Murder infiltrates the International Home Furnishings Market in High Point, N.C...

...child molestation case. Advertising.

PUTNAM

Endangered Species (Mar., \$22.95) by Nevada Barr. Park ranger Anna Pigeon probes a suspicious crash of a drug interdiction **plane** on an isolated island off Georgia. Advertising.

The Harlequin Tea ...special dress-ups.

CROWN

The Handbook of Doll Repair and Restoration (Aug., \$14) by Mary Westfall presents simple as well as advanced techniques.

ROBERT DAVIES

Plane Talk and Car Talk (Apr., \$8.99 each) by Lewis Poteet provide the jargon.

DOUBLEDAY

Dick E. Birdfeeding 101: A Tongue-and-Break Account and...

12/3,K/10 (Item 2 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

08103594 SUPPLIER NUMBER: 17296163 (USE FORMAT 7 OR 9 FOR FULL TEXT)

From telepresence to true immersive imaging: into real-life video - now!
Portland OR's Dodeca delivers immersive, omnidirectional video. (Dodeca
LLC)

Anderson, Paul I.

Advanced Imaging, v10, n7, p48(3)

July, 1995

ISSN: 1042-0711 LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 1929 LINE COUNT: 00158

... of programming."

RoundAbout immersive video lends itself to programming with multiple applications. The image segments can be projected separately in a dome for an overall **immersive image**, or seen through a roving window of interest in a Head-Mounted Display. Each method of display has its advantages. With the dome, it is...

...greater resolution and an image filling more of your field of view. With the HMD it's an individual experience, but you always have a **point of view** from the exact center of the **sphere**, so there is no distortion and you have the ability to look around below the horizon.

Dodeca sees its primary applications in the large (\$5...

12/3,K/11 (Item 3 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

05231799 SUPPLIER NUMBER: 10915495 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Making a scene: visual display systems can now be affordable as well as technically sophisticated. (as training devices for air pilots)

Hopkins, Harry

Flight International, v140, n4272, p44(3)

June 25, 1991

ISSN: 0015-3710 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 2596 LINE COUNT: 00201

... transforms display-screen co-ordinates into real-world co-ordinates - searching memory to find out what should be at the pixel.

VISTAR distinguishes between terrain **maps** and runway marking **maps**, adding **texture** and basic colour for each display pixel, which is further modulated. Each **surface** element is held in memory as a plan view. It can be processed to appear rotated, inverted or angled off against the desired **viewpoint**.

Resolution is limited only by the size of the individual relevant memory; the level is chosen by the position of a range of bits within...

12/3,K/12 (Item 4 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

05181066 SUPPLIER NUMBER: 10806444 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Rolling your own: producing an animation requires an understanding of both your animation system and the planning process. (includes related article on real-time video) (tutorial)

MacNicol, Gregory

Computer Graphics World, v14, n6, p78(6)

June, 1991

DOCUMENT TYPE: tutorial ISSN: 0271-4159 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3479 LINE COUNT: 00268

... system utilizing a different software product.

Rendering

Rendering brings realism to a 3D model. Light sources are added and positioned, the camera's angle or **viewpoint** is determined, and special details are added to the model which can give it photo-realistic detail. Visual screens or "maps" can be superimposed to...

...that, when projected onto the wall, will appear as if it were painted on the wall--complete with any distortion resulting from wall curving or **surface** irregularities. If you want to avoid distortion from the "screen," the image can be "wrapped" (like a present) instead. Other types of mapping, such as "bump" mapping, can add remarkably realistic attributes to a completed image. A good example of bump **mapping** is the addition of **textured** orange peel-like irregularities to an otherwise smooth **sphere**.

Perhaps the most compelling rendered attributes are shadows. And because shadows have controllable qualities, images can be rendered that have distinctive impact and originality. The...

12/3,K/13 (Item 1 from file: 636)

DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2000 The Gale Group. All rts. reserv.

04702582 Supplier Number: 63022414 (USE FORMAT 7 FOR FULLTEXT)

Hotware; A Review of New Products.

Ochiva, Dan

Millimeter, pNA

May, 2000

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 1129

... 3D models from still images, whether photo-, video-, or film-based. Here's how to use it: First, film or photograph an object from different **viewpoints**; at least four are needed. After digitizing and importing the images into the program, select a few corresponding points within each image (the program's ...resides. You can then edit the displayed polygonal mesh for a better-fitting result. Finally, ImageModeler attaches a combination of the original images to the **surfaces** as **texture maps**. The resulting model can be exported to any third-party compositing, animation, or CAD package.

ImageModeler runs under Windows NT and is the fourth application...

12/3,K/14 (Item 1 from file: 88)

DIALOG(R)File 88:Gale Group Business A.R.T.S.
(c) 2000 The Gale Group. All rts. reserv.

03919917 SUPPLIER NUMBER: 18371511 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Fractal Poser sets your images in motion. (Fractal Design Corp's 3D modeling software) (Software Review) (Evaluation)

Simone, Luisa

PC Magazine, v15, n12, p54(1)

June 25, 1996

DOCUMENT TYPE: Evaluation ISSN: 0888-8507

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 905 LINE COUNT: 00072

...ABSTRACT: and poses. Figures can be rendered along with imported bitmapped images or exported as .BMP or TIFF files for use with raster-paint software. Bump **maps** and **texture maps** can be applied to models for contouring muscles and adding tight-fitting clothing or **surface** patterns, respectively. Poser is designed for creating reference models that will be enhanced further with paint and illustration programs.

12/3,K/15 (Item 2 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.
(c) 2000 The Gale Group. All rts. reserv.

03813859 SUPPLIER NUMBER: 17903607 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Reza Abdo: 1963-1995. (Iranian American theater director) (In
Memory) (Obituary)
Bell, John
TDR (Cambridge, Mass.), v39, n4, p9(1)
Winter, 1995
DOCUMENT TYPE: Obituary ISSN: 1054-2043 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 5843 LINE COUNT: 00471

... one of the three phases, was not capable of catching the beauty of the music, die power of the human connections, and the viability of **images**. Gardzienice provided a total **immersion** into various Ukrainian folk cultures: storytelling, dancing, singing. The culmination of the expedition was in the third phase, which included my company, the Kadmus Theatre...

...references to documents of past expeditions, I have a sense Allain is suffering from a nostalgia for an experience he never had. Allain's antagonism **surfaces** again in his view of their current performances. At the start he admits to not always embracing "Gardzienice's international success with open arms" (93...a theatre with a 18-year history of successfully communicating a collective artistic vision. Allain's criticism of Staniewski rings hollow without a more informed **point of view**. In his specific criticism of Gardzienice's most recent performance, Carmina Burana, Allain cites the use of newcomers as undermining his own ideal of the...

12/3,K/16 (Item 3 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.
(c) 2000 The Gale Group. All rts. reserv.

03209574 SUPPLIER NUMBER: 14499103 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Physical chemistry of the H₂SO₄/HNO₃/H₂O system: implications for polar stratospheric clouds.
Molina, M.J.; Zhang, R.; Woolridge, P.J.; McMahon, J.R.; Kim, J.E.; Chang, H.Y.; Beyer, K.D.
Science, v261, n5127, p1418(6)
Sept 10, 1993
ISSN: 0036-8075 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 4688 LINE COUNT: 00385

... Cl₁.sub.2] (gas) + [H₁.sub.2]O(liq) (4)
An alternative mechanism that has been suggested involves molecular adsorption of the reactants at the **surface** of the solid particles, with Langmuir adsorption isotherms, competition for active sites, and so forth (29). However, from a chemical bonding **point of view**, the energy involved in such adsorption should be at most 30 kJ/mol, corresponding to the formation of a strong hydrogen bond between HCl and the ice **surface**; the consequence of such a small interaction energy would be the incorporation of negligible amounts of HCl at the **surface** of the cloud particles under stratospheric conditions (26, 30). In contrast, if the HCl molecules are **completely surrounded** by water molecules with appropriate orientations they dissociate, releasing

75 kJ/mol. This HCl solvation energy is large enough to rationalize the laboratory measurements, namely...

12/3,K/17 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2000 The Gale Group. All rts. reserv.

02173043 SUPPLIER NUMBER: 20573524 (USE FORMAT 7 OR 9 FOR FULL TEXT)

3D Webmaster: Web worlds with depth. (Superscape's Web authoring software)
(Software Review) (Evaluation)

Freund, Jim

Computer Shopper, v18, n6, p490(1)

June, 1998

DOCUMENT TYPE: Evaluation ISSN: 0886-0556

LANGUAGE: English

RECORD TYPE: Fulltext

WORD COUNT: 1146 LINE COUNT: 00092

... relation to that object. Events, such as a mouse click or a movement, can be set to trigger sounds and animation.

Webmaster lets you use "viewpoints," which are sort of 3-D bookmarks, to navigate your world. **Viewpoints** can be dynamic, letting you move around within your world, or static, in which case you can use the navigation controls to manipulate a given object such as a car or person. You can also apply **textures** to objects in different manners, depending on the shape of the object and on how many **planes** a single texture needs to cover. To keep your file as small as possible, you can eliminate unneeded facets, and replace "distant" objects or groups...

12/3,K/18 (Item 2 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2000 The Gale Group. All rts. reserv.

02082898 SUPPLIER NUMBER: 19604318 (USE FORMAT 7 OR 9 FOR FULL TEXT)

V-Realm terraforms the Web. (Integrated Data Systems V-Realm Builder 2.0)

(Software Review) (Evaluation)

Freund, Jim

Computer Shopper, v17, n8, p627(1)

August, 1997

DOCUMENT TYPE: Evaluation ISSN: 0886-0556

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 1216 LINE COUNT: 00096

... integrity of the VRML language in the resulting file.

Some of the program's other notable features include the ability to transform and group primitives, apply **textures** to 2-D and 3-D **surfaces**, create light sources, establish "viewpoints" (a form of bookmark within the worlds), use an elevation grid editor to create realistic (or fantastic) topographical landscapes, and assign an URL to an...

12/3,K/19 (Item 3 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2000 The Gale Group. All rts. reserv.

01740374 SUPPLIER NUMBER: 16603247

Virtus WalkThrough Pro 2.0. (Virtus Corp) (Software Review) (Evaluation)

Martinez, Carlos Domingo

Macworld, v12, n4, p60(1)

April, 1995

DOCUMENT TYPE: Evaluation ISSN: 0741-8647

LANGUAGE: ENGLISH

RECORD TYPE: ABSTRACT

...ABSTRACT: 495 Virtus WalkThrough Pro 2.0 is a powerful design tool that lets architects and space planners create walk-through models with a three-dimensional **point** of **view**; end users can travel anywhere in the model scene with no constraints by simply moving the mouse. The new version runs native on Power Macs, allowing near-real-time response even when using complex **texture maps**. Its three-dimensional environment is very accessible and easy to learn. Designers create and edit objects in the Design views which automatically appear as shaded...

...programs, but is fairly versatile. It builds 3-D objects by extruding 2-D shapes and lets user manipulate simple polygons into custom shapes. The **Surface** editor lets users add textures to 3-D objects. A **surface** can be textured, translucent or transparent, suggesting doors, windows and

building materials. Walkthrough Pro has some quirks, sometimes quitting unexpectedly and generating imprecise **texture maps**.

12/3, K/20 (Item 4 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2000 The Gale Group. All rts. reserv.

01363178 SUPPLIER NUMBER: 08527484 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Modelling with style.

Pipes, Alan

3D, n25, p19(2)

May, 1990

ISSN: 0953-2331 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 998 LINE COUNT: 00078

ABSTRACT: Product designers who have found solid modelers such as RoboSolid and AutoSolid somewhat unnatural can now choose from newer products that allow wireframe, **surface**, and solid models to coexist. Alias, from ECS, has a relatively simple freeform input method, and is especially effective for renderings and animation. It also...

...features linking, thereby enabling components to pivot, move, and slide independently. Desktop Engineering Systems' Dimensions costs 1,595 pounds sterling, and has freeform curve and **surface** tools, optional **texture mapping**, and ray tracing. Newer thermal transfer printers produce outputs indistinguishable from photographs. Affordable desktop concept-to-production systems are expected in the near future.

16/3,K/1 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2000 The Gale Group. All rts. reserv.

05817151 Supplier Number: 50323808 (USE FORMAT 7 FOR FULLTEXT)

CPU: **Image-Editing Software -- Lesson Thirty-Two**

Computer Retail Week, v8, n222, p24C

Sept 21, 1998

Language: English Record Type: Fulltext

Article Type: Article

Document Type: Magazine/Journal; Trade

Word Count: 1362

... layers makes up the total image.

Retouching: This term is used to refer to making subtle changes to an image in order to remove flaws.

Texture Mapping : In computer graphics, the creation of regular **surfaces** such as a brick wall and irregular **surfaces** such as wood grain. A two-dimensional image of the **texture** is created, called a **texture map**, which is "wrapped around" a three-dimensional object using various **texture mapping** algorithms.

Copyright 1998 CMP Media Inc.

16/3,K/2 (Item 1 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

(c) 1999 The Gale Group. All rts. reserv.

01863761

IO RESEARCH SHOWING LATEST ENHANCEMENTS TO DESIGNER SOFTWARE

News Release November 11, 1987 p. 1

... colour, solid-modelled visuals. DESIGNER-RENDER is the latest software add-on for the acclaimed DESIGNER-3D package. DESIGNER-RENDER provides extremely sophisticated control of **surface** textures and of the light absorbency, translucency and reflectivity qualities of an object. Objects can be defined as having the dull characteristics of rubber, the reflective, shiny **surface** of metal, or the combined translucency and reflectivity of glass. **Texture -mapping** allows **surface** **textures** or finishes to be wrapped around objects, so that, for instance, a frame-grabbed image of a carpet pattern may be applied to the floor of an interior design, or a...

16/3,K/3 (Item 1 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

(c)2000 The Gale Group. All rts. reserv.

09431640 SUPPLIER NUMBER: 17843401 (USE FORMAT 7 OR 9 FOR FULL TEXT)

A virtual cadaver comes to life. (Virtual Human database from Engineering Animation Inc.)

Deitz, Dan

Mechanical Engineering-CIME, v117, n12, p136(1)

Dec, 1995

ISSN: 0025-6501 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 824 LINE COUNT: 00069

... produced by EAI for Mosby-Year Book.

To develop Virtual Human, EAI assembled a team of biomedical engineers, anatomists, and physicians to build 3-D **surface** models on the basis of the Visible Human data. Medical illustrators then painted **texture maps** - highly realistic images that they then wrapped around the accurate computer-**surface** models to give them an extraordinarily lifelike appearance.

"Just as mechanical engineers need accurate, realistic human models to ensure the accuracy and realism of digital..."

16/3,K/4 (Item 2 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

08951369 SUPPLIER NUMBER: 18641401 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Yarn & fiber: getting down to basics. (Spotlight on Socks) (includes glossary)

WWD, v172, n44, pS10(4)

Sep 3, 1996

ISSN: 0149-5380 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2236 LINE COUNT: 00174

... shrinks to the center causing the low-shrinkage fiber to bulk or fluff up. High Pile: Yarns knitted into loops that form a cushion-like **surface**. They may be cut, as in velours, or uncut, as in terry fabrics. High Twist: A yarn-spinning process in which more twist is used than is needed for normal processing to provide desired esthetic properties such as harshness or brightness or to reduce hairiness on the yarn **surface**. Hydrophilic Fibers: Fibers with a tendency to absorb and hold moisture, such as cotton and rayon. Hydrophobic Fibers: Fibers which tend to repel moisture, such...

...along the length of the yarn. Nylon: See page 10. Open-End Spun Yarn: Yarn made by a process in which fibers are twisted and **wrapped around** each other by the use of a rapidly rotating rotor. The process is much faster than ring spinning. Pima Cotton. A longer staple cotton fiber...

...Shetland sheep. Now often used to describe yarns that offer Shetland characteristics. Skein-Relaxed: A method of applying bulk to a yarn by the controlled **application** of heat. This softens yarn **texture** and hand. Sliver: A loose, soft, untwisted strand or rope of fibers used in making yarn. In diameter, it is about the size of a...

...low shrinkage potential. After this blend is spun into yarn, it is subjected to steam and the resultant strains force the low shrinkage fibers to **surface** as loops. This produces a yarn - and a sock - with high bulk, softness and loft. Twist: In yarn, the number of turns about its axis...

16/3,K/5 (Item 3 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

08864297 SUPPLIER NUMBER: 18451615

Virtual molding: a challenge to the analysis industry.

Engelstein, Geoffrey

Appliance Manufacturer, v44, n6, p59(3)

June, 1996

ISSN: 0003-679X LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1743 LINE COUNT: 00138

... of VM, it is necessary to render parts in their actual color and texture. Technology currently exists to do this. Two-dimensional textures can be **wrapped around** complex shapes in a process called **texture mapping**. In order to implement this, it would be necessary for a library of textures to be created, based on texture standards (the SPI standards, for...

...textures) can be developed to mimic the effect. The overall texture for a model could then be defined, along with any different textures for other **surfaces**. It is also important to define the reflectivity of a **surface**. Blush, for example, often manifests itself as a reflectivity change rather than a discoloration,

Visualizing weld lines and blush

Much work has been done on...

16/3,K/6 (Item 4 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

08111362 SUPPLIER NUMBER: 17280227 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Nvidia launches multimedia accelerator; first chip to combine audio, video, and 3D graphics acceleration. (NV1) (includes related article on price and availability) (Product Announcement)

Gwynnap, Linley

Microprocessor Report, v9, n9, p13(3)

July 10, 1995

DOCUMENT TYPE: Product Announcement ISSN: 0899-9341 LANGUAGE:
English RECORD TYPE: Fulltext
WORD COUNT: 2124 LINE COUNT: 00166

... 2D acceleration as well. It accelerates common graphics functions such as raster operations and line drawing while providing video functions such as pixel expansion and **texture mapping**. By combining these effects, the graphics engine can map a moving video image onto a curved shape. Video of an actor's face, for example, can be **wrapped around a sphere** to create a realistic 3D image of a character speaking.

Nvidia declined to provide benchmark measurements of its chip in either 2D or 3D modes...

16/3,K/7 (Item 5 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

07652453 SUPPLIER NUMBER: 16034795 (USE FORMAT 7 OR 9 FOR FULL TEXT)
3D Studio retains the lead in 3-D illustration. (Autodesk Inc's 3D Studio 4.0 illustration software) (First Looks) (Software Review) (Evaluation)

Prosise, Jeff

PC Magazine, v14, n2, p46(2)

Jan 24, 1995

DOCUMENT TYPE: Evaluation ISSN: 0888-8507 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1177 LINE COUNT: 00091

... of the Materials Editor made it an excellent way to view effects as we created them.

Any 3-D renderer worth its salt must support **texture mapping**, which can create realistic finishes--such as wood grain or roughness--by treating a 2-D bitmapped image like a piece of paper **wrapped around a 3-D object**. 3D Studio can **texture map** with virtually any bitmapped image format. But the program goes way beyond simple **texture mapping** with its **bump mapping** and **reflection mapping** capabilities. Bump mapping, for example, manipulates the intensity of pixels in a bitmapped image to vary the angles at which light is reflected off a **surface**. This effect creates an illusion of **surface roughness**. Reflection mapping simulates the shiny quality of chrome, glass, and polished **surfaces** by drawing in reflections of other objects.

Once the surface was established, we found tremendous flexibility in applying 3D Studio's three standard shading functions...

16/3,K/8 (Item 6 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

07289548 SUPPLIER NUMBER: 16058242 (USE FORMAT 7 OR 9 FOR FULL TEXT)
TextureScape 1.0: Specular application creates tileable bit-map textures. (Software Review) (In Brief) (Evaluation)

Long, Ben

MacWEEK, v8, n25, p36(1)

June 20, 1994

DOCUMENT TYPE: Evaluation ISSN: 0892-8118 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 953 LINE COUNT: 00074

TEXT:

animator that lets you create bit-mapped, tileable textures using shapes and outlines created in a PostScript drawing program. The \$195 application can create an infinite variety of high-resolution textures, making it ideal for users of paint and illustration programs, as well as for 3-D modelers who need surfaces to wrap around their models.

16/3,K/9 (Item 7 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

06184579 SUPPLIER NUMBER: 12928759 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Engineering visualization. (rendering and animation programs as an alternative to computer-aided design in engineering)

Forcade, Tim
Computer Graphics World, v15, n11, p37(5)
Nov, 1992
ISSN: 0271-4159 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2486 LINE COUNT: 00207

... edit specific appearances from a library of materials such as glass or wood or create appearances from scratch. Creating unique appearances combines techniques such as **texture** or **image mapping**, where any two-dimensional scanned or painted image can be wrapped around a three-dimensional object, or bump mapping, where 2D images are used to roughen an object's **surface**. Clearly, the quality of appearance-editing and previewing tools has a profound impact on the ease and speed with which **surface** looks may be used. Rendering programs offer extended user interfaces, added flexibility, and control of the process.

The number and variation in price, performance, and...

16/3,K/10 (Item 8 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2000 The Gale Group. All rts. reserv.

03504811 SUPPLIER NUMBER: 06581487 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Architectural animation. (Complete system at an affordable price.)

Jadrnicek, Rik
Computer Graphics World, v11, n4, p70(4)
April, 1988
ISSN: 0271-4159 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2143 LINE COUNT: 00161

... Topas other than to group the individual parts of each shape so that they could be manipulated as a single object. I then applied a **texture map** to the irregular upholstery **surface** of a chair and was surprised to see a seamless texture. **wrap around** the entire **surface**, leaving the metal legs unmapped.

Next, I created an animated fly-around the object and was amazed at how easily I could move from AutoCAD...

16/3,K/11 (Item 1 from file: 88)

DIALOG(R)File 88:Gale Group Business A.R.T.S.
(c) 2000 The Gale Group. All rts. reserv.

04122155 SUPPLIER NUMBER: 18962880 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Fractal Design Detailer. (paint software from Fractal Design) (Software Review) (Evaluation)

Biedny, David; Moody, Nathan
MacUser, v12, n2, p39(1)
Feb, 1997
DOCUMENT TYPE: Evaluation ISSN: 0884-0997 LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 1051 LINE COUNT: 00081

... in the 3-D animation/rendering program for parent/child linkage and animation.

Once your 3-D object is in Detailer, you create a new **texture map** and specify the way in which the texture is to be "wrapped" around the object -- cylindrical; spherical; or the critical "implicit," which conforms the texture to the shape of the target object. You also assign a **surface** type (color, reflection, bump, glow, or highlight) and start painting your texture. Detailer allows you to paint directly on a 3-D shape and also presents you with a window for more-traditional 2-D-**texture-map** editing. The 2-D and 3-D views are linked, so edits made in one appear instantly in the other.

Detailer includes most of the...

16/3,K/12 (Item 2 from file: 88)

DIALOG(R)File 88:Gale Group Business A.R.T.S.
(c) 2000 The Gale Group. All rts. reserv.

04008628 SUPPLIER NUMBER: 18377171 (USE FORMAT 7 OR 9 FOR FULL TEXT)
True Lies: perceptual realism, digital images, and film theory. (digital imaging and film making)
Prince, Stephen
Film Quarterly, v49, n3, p27(1)
Spring, 1996
ISSN: 0015-1386 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 7364 LINE COUNT: 00611

... distinct from the phases of model-building and animation and refers to the provision of texture, light, and color cues within a simulated environment. (32.) **Texture-mapping** is a process whereby a flat **surface** is detailed with texture, such as skin wrinkles, and can then be **wrapped around** a three-dimensional model visualized in computer space. Some **surfaces** **texture-map** more easily than others. Pat Byrne, at Post Effects, points out that spherical objects are problematic because the top and bottom tend to look pinched...

16/3,K/13 (Item 1 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2000 The Gale Group. All rts. reserv.

02239301 SUPPLIER NUMBER: 21173256 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Graphics: Illustrating with 3-D Art. (Technology Information) (Tutorial)
Ashford, Janet
Macworld, v15, n11, pNA(1)
Nov, 1998
DOCUMENT TYPE: Tutorial ISSN: 0741-8647 LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 1487 LINE COUNT: 00112

... Replace or edit the prefab textures on 3-d clip art models to create different effects.

Most 3-D programs include an extensive library of **surface** textures, with changeable attributes, that can be applied to any object. I applied these **textures** using the defaults for **mapping** (how **textures** are **wrapped around** an object), so the textures were applied differently to each part of the phone. Experiment with mapping methods (spherical, cubical, and so on) to find...

16/3,K/14 (Item 2 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2000 The Gale Group. All rts. reserv.

02119165 SUPPLIER NUMBER: 19829049 (USE FORMAT 7 OR 9 FOR FULL TEXT)
3-D tricks for the 2-D trade. (Technology Information) (Brief Article)
Ashford, Janet

Macworld, v14, n11, p150
Nov, 1997

DOCUMENT TYPE: Brief Article

ISSN: 0741-8647

LANGUAGE: English

RECORD TYPE: Fulltext

WORD COUNT: 1287 LINE COUNT: 00094

... cylinder, and a pyramid.

2 Choose a seamless image to wrap around your shapes.

Once you have your shapes in place, find an image to wrap around them, preferably one designed to repeat seamlessly, much as wrapping paper does. Odam found an image of clover in the Wraptures stock collection. If necessary...

...image to the PICT file format. To load it into StudioPro, select the Textures tab from the Resource palette (Windows: Show Resource Palette), choose New **Surface** Texture from the pop-up menu, click on the Map button, choose Load from the Map dialog box, and select your file. It will appear as a highlighted button under the **Textures** tab. To **apply** it to the **surface** of your shapes, select the model (Selection: Select All) and click on **Apply** under the **Textures** tab. (Don't be alarmed if little seems to happen --you won't see the finished effect until your model is rendered.)

3 Adjust your...

16/3,K/15 (Item 3 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2000 The Gale Group. All rts. reserv.

01778972 SUPPLIER NUMBER: 16891118 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Virtual reality resource guide. (Directory)

Berg, Tor

AI Expert, v10, n5, p25(18)

May, 1995

DOCUMENT TYPE: Directory

ISSN: 0888-3785

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 21204 LINE COUNT: 01806

... for HP/SGI /Division's Pro Vision workstations. Price: Starts at \$2,300.

Pro Vision 100 VPX. An integrated UNIX platform for development of fully **immersive** VR applications. **Pixel-Planes Graphics** offers up to 600 k Gouraud or Phong shaded, Z-buffered, fully **texture -mapped** polygons and 1.994 billion, 24-bit pixels/second. Includes HMD, tracking, 3D mouse, and optional 3D audio. Networkable for multiple users. Price: Single pipe, starts at \$60,000; dual pipe, starts at \$89,700.

ProVision 10 VPX. A VR accelerator providing high-performance, fully **immersive**, **texture -mapped** **images** via Division's VPX image generator. **Pixel-PLanes Graphics** offers 600k Gouraud or Phong shaded, Z-buffered, fully **texture -mapped** polygons and 1.994 billion, 24-bit pixels/second. Available for the HP 715, 725, 735, or 755 workstations. Price: Starts at \$34,000.

Integrated...

16/3,K/16 (Item 4 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2000 The Gale Group. All rts. reserv.

01548198 SUPPLIER NUMBER: 13217656 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Putting it all together: page makeup and graphics. (page layout software for desktop publishing) (the Seybold San Francisco '92 conference) (includes a selective glossary of three-dimensional terms) (Cover Story)

Seybold Report on Desktop Publishing, v7, n4, p39(10)

Dec 1, 1992

DOCUMENT TYPE: Cover Story

ISSN: 0889-9762

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 7482 LINE COUNT: 00576

... TGA, GIF and DXF formats.

Rendering. 3D Designer features predefined materials such as glass, stone, plastic, chrome and gold, which can be applied to any **surface**. Users mostly work in wireframe mode, but can render the entire image or any portion of the image to see their results. **Texture mapping** tools support color, bump, shininess and luminance maps, while photos can be scanned in and **wrapped around** an object to produce a photorealistic effect. The product also features user-controllable reflections, shadows, highlights, transparency and fog. Users have full software control over...?

; File 15:ABI/Inform(R) 1984-2000/Sep 25
; (c) 2000 Bell & Howell
File 98:General Sci Abs/Full-Text 1984-2000/Aug
; (c) 2000 The HW Wilson Co.
File 674:Computer News Fulltext 1989-2000/Sep W1
; (c) 2000 IDG Communications
File 624:McGraw-Hill Publications 1985-2000/Sep 21
; (c) 2000 McGraw-Hill Co. Inc
File 9:Business & Industry(R) Jul/1994-2000/Sep 25
; (c) 2000 Resp. DB Svcs.
File 75:TGG Management Contents(R) 86-2000/Sep W3
; (c) 2000 The Gale Group
File 370:Science 1996-1999/Jul W3
; (c) 1999 AAAS
File 810:Business Wire 1986-1999/Feb 28
; (c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
; (c) 1999 PR Newswire Association Inc
File 612:Japan Economic Newswire(TM) 1984-2000/Sep 25
; (c) 2000 Kyodo News
File 635:Business Dateline(R) 1985-2000/Sep 23
; (c) 2000 Bell & Howell
File 484:Periodical Abstracts Plustext 1986-2000/Sep W3
; (c) 2000 Bell & Howell
File 647:CMP Computer Fulltext 1988-2000/Sep W1
; (c) 2000 CMP
File 623:Business Week 1985-2000/Sep W2
; (c) 2000 The McGraw-Hill Companies Inc
File 20:World Reporter 1997-2000/Sep 26
; (c) 2000 The Dialog Corporation plc

Set	Items	Description
S1	39	P() (SURFACE? OR SPHERE? OR PLANE? ?) OR PSURFACE? OR PSPHERE?
		RE?
S2	194855	VIEWPOINT? OR VIEW(1N)POINT? ? OR DIRECTION(1W)VIEW? ?
S3	3521	(TEXTURE? OR TEXEL?) (5N) (MAP? ? OR MAPP? OR APPLICATION? OR
		APPLY?)
S4	19553	(FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?) (3N)SURROUND? OR
		WRAP? ()AROUND OR (IMMERS???? OR ENVELOP?) (5N) (SCENE? OR IMAG-
		E? OR DATA OR PICTURE? OR GRAPHIC? ? OR SPACE)
S5	94	SAMPL?(5N) (VISIBLE OR VIRTUAL OR DIGITAL) (3N) (WORLD? OR SP-
		ACE OR ENVIRON?)
S6	666051	S1 OR SURFACE? OR PLANE OR PLANES OR SPHERE?
S7	0	S6(S)S2(S)S3(S) (S4 OR S5)
S8	1	S2(S)S3(S) (S4 OR S5)
S9	6	S6(S)S3(S) (S4 OR S5)
S10	5	RD (unique items)
S11	4	S6(S)S2(S) (S3 OR S4 OR S5)
S12	4	S11 NOT (S8 OR S10)
S13	4	RD (unique items)

; 8/3,K/1 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2000 Bell & Howell. All rts. reserv.

01041722 96-91115

CAD/CAM industry report 1995: Walk-through realism slashes development time

Teschler, Leland

Machine Design v67n10 PP: 60-70 May 25, 1995

ISSN: 0024-9114 JRNL CODE: MDS

WORD COUNT: 1761

...TEXT: a six-degree-of-freedom mouse or other cursor controller, authoring software for building models, and runtime software for, among other things, calculating perspectives and **view points** in real time as the viewer walks through **scenes** .

Division Inc.'s fully **immersive** turnkey system gives an idea of the hardware that high-end VR demands. The U.K. company was among the first to apply VR techniques...

10/3,K/1 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2000 Bell & Howell. All rts. reserv.

01243971 98-93366

Virtual molding
Engelstein, Geoffrey
Appliance Manufacturer v44n6 PP: 59-61 Jun 1996
ISSN: 0003-679X JRNL CODE: APL
WORD COUNT: 1641

...TEXT: of VM, it is necessary to render parts in their actual color and texture. Technology currently exists to do this. Two-dimensional textures can be **wrapped around** complex shapes in a process called **texture mapping**. In order to implement this, it would be necessary for a library of textures to be created, based on texture standards (the SPI standards, for...

... textures) can be developed to mimic the effect. The overall texture for a model could then be defined, along with any different textures for other **surfaces**. It is also important to define the reflectivity of a **surface**. Blush, for example, often manifests itself as a reflectivity change rather than a discoloration.

Visualizing weld lines and blush Much work has been

10/3,K/2 (Item 2 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2000 Bell & Howell. All rts. reserv.

01133597 97-82991
A virtual cadaver comes to life
Deitz, Dan
Mechanical Engineering v117n12 PP: 136 Dec 1995
ISSN: 0025-6501 JRNL CODE: MEG
WORD COUNT: 760

...TEXT: produced by EAI for Mosby-Year Book.

To develop Virtual Human, EAI assembled a team of biomedical engineers, anatomists, and physicians to build 3-D **surface** models on the basis of the Visible Human data. Medical illustrators then painted **texture maps** --highly realistic images that they then **wrapped around** the accurate computer **surface** models to give them an extraordinarily lifelike appearance.

"Just as mechanical engineers need accurate, realistic human models to ensure the accuracy and realism of digital..."

10/3,K/3 (Item 3 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2000 Bell & Howell. All rts. reserv.

00611141 92-26244
Rendering: Making Realistic 3-D Graphics
Poole, David
Macworld v9n6 PP: 176-182 Jun 1992
ISSN: 0741-8647 JRNL CODE: MAW
WORD COUNT: 3264

...TEXT: These reflections are highly realistic, making objects appear to truly reflect their environment.

Reflection maps produce less realistic images than does ray tracing. A reflection **map**, like a **texture map**, is an image file. Unlike **texture**

files, which are attached to the object, reflection maps wrap around the space surrounding the object. This creates the illusion that the object reflects its environment, but makes it extremely difficult to mirror individual, detailed objects. Reflection maps work best on **surfaces** that distort whatever they reflect--say, on a curved candlestick or chrome logo.

PROCEDURAL TEXTURES AND BUMPS

Procedural textures don't require the use of...

10/3,K/4 (Item 1 from file: 484)

DIALOG(R)File 484:Periodical Abstracts Plustext
(c) 2000 Bell & Howell. All rts. reserv.

03466656 (USE FORMAT 7 OR 9 FOR FULLTEXT)

3-D tricks for the 2-D trade

Ashford, Janet

MacWorld (IMCW), v14 n11, p150-151, p.2

Nov 1997

ISSN: 0741-8647 JOURNAL CODE: IMCW

DOCUMENT TYPE: Feature

LANGUAGE: English RECORD TYPE: Fulltext; Abstract

WORD COUNT: 1094

TEXT:

... a cylinder, and a pyramid.

Choose a seamless image to wrap around your shapes.

Once you have your shapes in place, find an image to wrap around them, preferably one designed to repeat seamlessly, much as wrapping paper does. Odam found an image of clover in the Wraptures stock collection. If necessary...

...image to the PICT file format. To load it into StudioPro, select the Textures tab from the Resource palette (Windows: Show Resource Palette), choose New **Surface** Texture from the pop-up menu, click on the Map button, choose Load from the Map dialog box, and select your file. It will appear as a highlighted button under the **Textures** tab. To apply it to the **surface** of your shapes, select the model (Selection: Select All) and click on **Apply** under the **Textures** tab. (Don't be alarmed if little seems to happen -you won't see the finished effect until your model is rendered.)

3 Adjust your...

10/3,K/5 (Item 1 from file: 647)

DIALOG(R)File 647:CMP Computer Fulltext
(c) 2000 CMP. All rts. reserv.

01172824 CMP ACCESSION NUMBER: CRW19980921S0006

CPU: **Image-Editing Software - Lesson Thirty-Two**

COMPUTER RETAIL WEEK, 1998, n 219, PGC24

PUBLICATION DATE: 980921

JOURNAL CODE: CRW LANGUAGE: English

RECORD TYPE: Fulltext

SECTION HEADING: Computer Products University

WORD COUNT: 1371

... layers makes up the total image.

Retouching: This term is used to refer to making subtle changes to an image in order to remove flaws.

Texture Mapping : In computer graphics, the creation of regular **surfaces** such as a brick wall and irregular **surfaces** such as wood grain. A two-dimensional image of the **texture** is created, called a **texture map**, which is "wrapped around" a three-dimensional object using various **texture mapping** algorithms.

Copyright 1998 CMP Media Inc.

13/3,K/1 (Item 1 from file: 484)
DIALOG(R)File 484:Periodical Abstracts Plustext
(c) 2000 Bell & Howell. All rts. reserv.

02275442 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Renderize Live

Ackler, Bryan
TCI (GTHC), v29 n3, p47, p.1
Mar 1995
ISSN: 1063-9497 JOURNAL CODE: GTHC
DOCUMENT TYPE: Feature
LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 947 LENGTH: Medium (10-30 col inches)

TEXT:

... well. To edit a view, the icon representing the view is dragged and dropped into the Edit well. To change or add texture to a **surface**, the icon of the object is dragged to the Texture well. The simplicity of the drag-and-drop approach radically lowers and shortens the learning curve. The program manual includes 12 tutorials that progressively carry you from creating a project, **mapping textures**, working with lights and reflections, and camera animations. Renderize.Live's primary orientation is toward rendering a static setting. The current version of the program does allow for animation of the camera or **point of view**. This animation format is ideal for the performance environment where we deal with audience **points of view**, rather than the movement of the setting. Animation of the camera to move it from one sightline checkpoint to another is a simple process.

Once...

13/3,K/2 (Item 2 from file: 484)
DIALOG(R)File 484:Periodical Abstracts Plustext
(c) 2000 Bell & Howell. All rts. reserv.

01691611 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Physical chemistry of the H(2)SO(4)/HNO(3)/H(2)O system: Implications for polar stratospheric clouds
Molina, M J; Zhang, R; Wooldridge, P J; McMahon, J R; et al
Science (GSCI), v261 n5127, p1418-1423, p.6
Sep 10, 1993
ISSN: 0036-8075 JOURNAL CODE: GSCI
DOCUMENT TYPE: Feature
LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 4648 LENGTH: Long (31+ col inches)

TEXT:

... Cl sub 2 (gas) + H sub 2 O(liq) (4)
An alternative mechanism that has been suggested involves molecular adsorption of the reactants at the **surface** of the solid particles, with Langmuir adsorption isotherms, competition for active sites, and so forth (29). However, from a chemical bonding **point of view**, the energy involved in such adsorption should be at most 30 kJ/mol, corresponding to the formation of a strong hydrogen bond between HCl and the ice **surface**; the consequence of such a small interaction energy would be the incorporation of negligible amounts of HCl at the **surface** of the cloud particles under stratospheric conditions (26, 30). In contrast, if the HCl molecules are **completely surrounded** by water molecules with appropriate orientations they dissociate, releasing ==75 kJ/mol. This HCl solvation energy is large enough to rationalize the laboratory measurements, namely, that the amount of HCl taken up by ice **surfaces** under similar conditions corresponds to a ...in that film would be 10 to 40 percent, and the HCl would be fully ionized (31). Furthermore, laboratory investigations of reaction 3 on the **surfaces** of true liquid HCl solutions in that concentration range yield essentially the same gamma values as those measured on ice or NAT **surfaces** in the presence of HCl vapor at partial pressures of the order of 10 sup -7 to 10 sup -8 torr (26, 27). Thus the availability of water at the particle **surfaces**, which increases rapidly

as the ice frost point is approached, may facilitate these heterogeneous reactions through solvation of the acid species.

REFERENCES AND NOTES

1...

13/3,K/3 (Item 1 from file: 20)

DIALOG(R)File 20:World Reporter

(c) 2000 The Dialog Corporation plc. All rts. reserv.

09688946 (USE FORMAT 7 OR 9 FOR FULLTEXT)

REALVIZ S.A. Announces ImageModeler For Building Photo-Real 3D Models From Still Images

PR NEWSWIRE

February 02, 2000

JOURNAL CODE: WPRW LANGUAGE: English RECORD TYPE: FULLTEXT

WORD COUNT: 688

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... features high-end production and editing tools that are specifically designed for professional production needs.

Using ImageModeler

An object is filmed or photographed from different **viewpoints**. The images are digitized and imported into ImageModeler. All images are displayed within the ImageModeler interface, and the user selects a few corresponding points on...

... displays a polygonal mesh that may be edited by the user. Finally, a combination of the original digital images are attached to the model's **surfaces** as **texture maps**. The resulting model can be exported to any third party compositing, animation or CAD software for further enhancement and animation.

Integration with REALVIZ' Image Processing...

13/3,K/4 (Item 2 from file: 20)

DIALOG(R)File 20:World Reporter

(c) 2000 The Dialog Corporation plc. All rts. reserv.

01700919 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Viewpoint DataLabs Helps Create a Monster -- Godzilla Unleashed on Hollywood by Viewpoint Modeling Team

BUSINESS WIRE

May 21, 1998 15:34

JOURNAL CODE: WBWE LANGUAGE: English RECORD TYPE: FULLTEXT

WORD COUNT: 1066

(USE FORMAT 7 OR 9 FOR FULLTEXT)

Viewpoint (R) DataLabs International Inc. today announced that the much-anticipated premiere of *Godzilla* features **Viewpoint** 3D computer models, including the film's leading lizard -- the flame-breathing, Brooklyn Bridge-smashing *Godzilla* himself. **Viewpoint** created the monstrous 3D model in one of the most detailed and extensive digitizing and computer graphics (CG) modeling projects ever completed. Among the many "firsts" of the *Godzilla* production, **Viewpoint**'s CG model of *Godzilla* appears in over ninety percent of the shots featuring the star character -- the most extensive use of a full-screen CG character animation in feature film history. **Viewpoint**'s 3D *Godzilla* model is so realistic that Centropolis was able to use **Viewpoint**'s CG *Godzilla* interchangeably with physical miniatures and animatronics of the creature as well as incorporate it with live-action background footage. "Skillful, intelligent computer modeling is the foundation upon which everything is built -- from **texture-mapping** to animation to seamless interaction with live action -- and why we chose **Viewpoint** DataLabs for the incredibly complex *Godzilla* character," said Steven Puri, president of Centropolis Effects. "**Viewpoint**'s achievement made it possible for our animators and texture editors to

achieve the impossible - a full-screen, in-your-face CG character." Centropolis selected **Viewpoint** for the project because of the two companies' prior success in collaborating on visual effects for the blockbuster Independence Day, in which **Viewpoint** created 3D models of the alien attack ships and F-18 fighter **planes** in less than one month, helping the producers meet the film's critical opening date of July 4. Another important factor was **Viewpoint**'s unparalleled experience and expertise in creating CG characters and creatures, which surpasses any other modeling company in the industry. Among these are the entire...

... production, we were able to achieve groundbreaking CG imagery neither company could have achieved on its own," said Walter Noot, vice president of production at **Viewpoint** DataLabs. "As for creating Godzilla, our collaborative process yielded a 'whole' that was much greater than the sum of its parts." The resulting team effort between **Viewpoint** and Centropolis breaks new ground in creative and business alliances, including record turnaround and resource efficiencies, and will likely serve as an example for future entertainment productions. In addition to the highly complex Godzilla character, **Viewpoint** created the intricately detailed CG versions of the "Baby 'Zillas" featured prominently in the film. The photorealistic 3D computer models of the Brooklyn Bridge and a New York City taxicab, also created by **Viewpoint** team, demanded the same attention to detail as the Godzilla character, because of the creature's interaction with the objects in the critical climax scene. **Viewpoint**'s digital models of the bridge and taxicab needed to match detailed miniatures created for the film and seamlessly integrate with shots of their physical counterparts. Centropolis also licensed a **Viewpoint** Platinum Library for use in Godzilla. The Platinum Library provided the Centropolis team with over 4,500 pre-built **Viewpoint** 3D computer models for use as CG props and set elements throughout the film.

Godzilla Goes 3D -- Modeling Facts

The primary challenge facing **Viewpoint** modelers...

• File 239:Mathsci 1940-2000 Nov
(c) 2000 American Mathematical Society
File 80:TGG Aerospace/Def.Mkts(R) 1986-2000/Sep 26
(c) 2000 The Gale Group

Set	Items	Description
S1	233	P() (SURFACE? OR SPHERE? OR PLANE? ?) OR PSURFACE? OR PSPHERE?
S2	20382	VIEWPOINT? OR VIEW(1N)POINT? ? OR DIRECTION(1W)VIEW? ?
S3	49	(TEXTURE? OR TEXEL?) (5N) (MAP? ? OR MAPP? OR APPLICATION? OR APPLY?)
S4	1684	(FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?) (3N) SURROUND? OR WRAP? () AROUND OR (IMMERS???? OR ENVELOP?) (5N) (SCENE? OR IMAGE? OR DATA OR PICTURE? OR GRAPHIC? ? OR SPACE)
S5	3	SAMPL? (5N) (VISIBLE OR VIRTUAL OR DIGITAL) (3N) (WORLD? OR SPACE OR ENVIRON?)
S6	218129	S1 OR SURFACE? OR PLANE OR PLANES OR SPHERE?
S7	0	S6(S)S2(S)S3(S) (S4 OR S5)
S8	0	S2(S)S3(S) (S4 OR S5)
S9	0	S6(S)S3(S) (S4 OR S5)
S10	0	S3(S) (S4 OR S5)
S11	10	S6(S)S2(S) (S3 OR S4 OR S5)
S12	10	RD (unique items)

12/3,K/1 (Item 1 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2000 American Mathematical Society. All rts. reserv.

02748760 MR 98a#53104

An introduction to Lorentz surfaces.

Weinstein, Tilla (Department of Mathematics, Rutgers University, New

Brunswick, New Jersey, 08903)

Corporate Source Codes: 1-RTG

Publ: Walter de Gruyter & Co., Berlin,

1996, xiv+213 pp. ISBN: 3-11-014333-X

Series: de Gruyter Expositions in Mathematics, 22.

Language: English

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (31 lines)

Reviewer: Ehrlich, Paul E. (1-FL)

...an extensive investigation of the dependence of conformal diffeomorphism on differentiability. In particular, uncountably many examples of \mathcal{C}^{∞} conformally diffeomorphic simply connected Lorentz **surfaces** are constructed, no two of which are \mathcal{C}^{∞} conformally diffeomorphic. In Chapter 4, a careful study is made of topologizing the boundary and...

...points; here the author explores certain issues not treated with enough care perhaps in Kulkarni's original article. The final two chapters deal with Lorentz **surfaces** from the **viewpoint of immersions** in Minkowski **space**, a subject on which the author has written a number of research papers over the years.

The reviewer would recommend this monograph to anyone looking...

12/3,K/2 (Item 2 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2000 American Mathematical Society. All rts. reserv.

02580852 MR 96g#00041

Prospects in topology.

Proceedings of the Conference in Honor of William Browder held at Princeton University, Princeton, New Jersey, March 1994. Edited by Frank Quinn.

Contributors: Quinn, Frank; Browder, William

Publ: Princeton University Press, Princeton, NJ,

1995, xiv+340 pp. ISBN: 0-691-02728-5

Series: Annals of Mathematics Studies, 138.

Language: English

Prospects in topology; Conference: Browder, William; Princeton, NJ,; Annals of Mathematics Studies, 1994 138

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (35 lines)

Reviewer: Editors

...and Michael W. Davis [Michael Walter Davis], Finite $K(\pi, 1)\{\backslash rm s\}$ for Artin groups (110--124); Peter J. Eccles, Double point manifolds of **immersions of spheres** in Euclidean **space** (125--137); Michael H. Freedman and Zhenghan Wang, Controlled linear algebra (138--156); Ian Hambleton and Erik K. Pedersen, Non-linear similarity revisited (157--174)
...

...Speculations on Gromov convergence of stratified sets, and Riemannian volume collapse (303--313); Andrew Ranicki, Bordism of automorphisms of manifolds from the algebraic L -theory **point of view** (314--327); Dennis Sullivan, Exterior d , the local degree, and smoothability (328--338).

\{Most of the papers are being reviewed individually.\} ...

12/3,K/3 (Item 3 from file: 239)

02202613 MR 91g#86007

Application of catastrophe theory to the study of the structural stability of seismic structures.

With comments by S. V. Goldin and a reply by the authors.

Anishkovich, E. M.

Kondrashkov, V. V.

Contributors: Goldin, S. V.

Izv. Akad. Nauk SSSR Ser. Fiz. Zemli

Izvestiya Akademii Nauk SSSR Seriya Fizika Zemli, 1989,, no. 10,
63--86. ISSN: 0002-3337 CODEN: IAFZBL

Language: Russian

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (31 lines)

Reviewer: Janeczko, Stanislaw (1-UCSC)

From the mathematical **point of view**, the authors investigate the local properties of the mapping $\pi \circ \Sigma$, $\pi: \boldsymbol{R}^3 \rightarrow \boldsymbol{R}^3$, $\pi(l...$

...and obtain several conclusions for the theory of seismic and geological discontinuities (displaced cracks) in space and time-space coordinates. Basically they look at the **space** discontinuities as the **envelope** of the family of **plane** curves $\frac{(x-1/2)^2}{(vt/2)^2} + \frac{z^2}{(v^2 t^2 - 1)^2} = 1$ in the (x, z) -**plane**. For time-space (coordinates $(t \circ 0, 1 \circ 0)$) discontinuities, an appropriate family of curves is given by $(1 \circ 0 - 1/2)^2 ...$

12/3,K/4 (Item 4 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2000 American Mathematical Society. All rts. reserv.

02023335 MR 88e#58001

Foundations of global nonlinear analysis.

With German, French and Russian summaries.

Rassias, Themistocles M.

Publ: BSB B. G. Teubner Verlagsgesellschaft, Leipzig,
1986, 218 pp. ISBN: 3-322-00342-6

Series: Teubner-Texte zur Mathematik [Teubner Texts in Mathematics], 86.

Language: English

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (35 lines)

Reviewer: Toth, G. (1-CA)

...introduction: ``The object of this book is to provide an account of some of the research work of the author on the theory of minimal **surfaces** and the problem of Plateau from the **point of view** of Morse-Palais-Smale critical point theory and the Morse index theorem. It is also devoted to some of the most important entries of development...

...amount of the classical problems in nonlinear global analysis. The topics include: 1. A study of multiplicity of the first conjugate boundary of a minimal **immersion** into a Euclidean **space** (accompanied by classical and explicitly worked-out examples), due to the author; 2. Stability of minimal **surfaces** in Euclidean spaces and **spheres** after J. Spruck and H. Mori; 3. A review of some of the aspects of the isoparametric problem; 4. Some inequalities between the eigenvalues (due to Hille and Protter) and properties of the eigenfunctions of a boundary value problem for the Laplacian; 5. Various classical problems and examples in minimal **surface** theory such as Calabi's problem on the existence of a complete minimal **surface** in \boldsymbol{R}^3 contained in a half-space; Morgan's construction of an analytic curve bounding a continuum of minimal submanifolds; uniqueness theorems...

12/3,K/5 (Item 5 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2000 American Mathematical Society. All rts. reserv.

01901574 MR 86c#22012

Representations of the Euclidean group in the plane.

Gruber, B. (Department of Mathematics, Southern Illinois University, Carbondale, 62901, Illinois)

Henneberger, W. C. (Department of Mathematics, Southern Illinois University, Carbondale, 62901, Illinois)

(Gruber, Bruno)

Corporate Source Codes: 1-SIL; 1-SIL

Nuovo Cimento B (11)

Il Nuovo Cimento. B. Serie 11, 1983, 77, no. 2, 203--233. ISSN: 0369-3554 CODEN: NIFBAP

Language: English Summary Language: Italian, Russian

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (28 lines)

Reviewer: Holman III, Wayne J. (Glen Ellyn, Ill.)

The theory of representations of the Euclidean algebra and group in the **plane** $E_{\text{sb}} 2$ is investigated from a general and basic **point of view**. A master representation is obtained for both the algebra and the group. This master representation induces (or subduces) all the representations of $E_{\text{sb}} 2$ which are studied in this paper. The master representation is defined on the **space** of the universal **enveloping** algebra Ω of $E_{\text{sb}} 2$, whose basis vectors are labeled by three discrete parameters. The finite-dimensional (linear, indecomposable) representations which are induced by...

12/3,K/6 (Item 6 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2000 American Mathematical Society. All rts. reserv.

01718109 MR 83f#92086c

Theorie du champ pictural. Note sur le calcul du poids positionnel.

Theory of the pictural field. Note on the calculation of positional weight

Guiraud, Jean

Lefevre, Jacques

Acad. Roy. Belg. Bull. Cl. Sci. (5)

Academie Royale de Belgique. Bulletin de la Classe des Sciences.

Koninklijke Belgische Academie. Mededelingen van de Klasse der Wetenschappen. 5e Serie, 1980, 66, no. 1, 46--55. ISSN: 0001-4141

CODEN: BCSAAF

Language: French

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: MEDIUM (25 lines)

Reviewer: Authors' summary

...need to be made explicit. The third paper defines these calculations and extends them to arbitrary polygons that can be contained in an arbitrary convex **plane** quadrilateral. Let T be a canvas with an irregular shape. From the **point of view** of its boundaries, or its individual sides, it is defined as an arbitrary convex **plane** quadrilateral with vertices $(t_{\text{sub}i}: 1 \leq i \leq 4)$ and sides $(c_{\text{sub}i}: 1 \leq i \leq 4)$. From the **point of view** of its shape, or its spread, it is defined by the part of the **plane** which is interior to T . We first give the general definition of the positional space inside the canvas T , we then consider a positional space with a homothetic shape, and establish methods for calculating the positional weight that can be applied to any polygon situated in T and thus **immersed** in the **space** defined above.''

...

12/3,K/7 (Item 7 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2000 American Mathematical Society. All rights reserved.

01394473 MR 52#15252

Teoriya ogibayushchikh.

Theory of envelopes

Zalgaller, V. A.

Publ: Izdat. ``Nauka'', Moscow,

1975, 104 pp.

Language: Russian

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: SHORT (8 lines)

Reviewer: Editors

This book is in two rather disjoint parts. The first is an elementary treatment of curves, **surfaces** and **envelopes** (of families) in the Euclidean **space** \mathbb{R}^3 and in the **plane** \mathbb{R}^2 . The discussion goes much further than in the usual textbooks but is concrete, intended for applications. The second part of the book is devoted to the theory of envelopes of higher-dimensional manifolds, from the **point of view** of singularities of differentiable mappings.

12/3,K/8 (Item 8 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2000 American Mathematical Society. All rights reserved.

01043526 MR 13,276f

Über einen Satz von L. Berwald und die Gaußsche Krümmung der Minimalflächen.

Pinl, M.

Monatsh. Math.

1951, 55,, 188--199

Language: German

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: MEDIUM (23 lines)

Reviewer: Jackson, S. B.

Consider a two-dimensional complex **surface** **immersed** in \mathbb{R}^n -dimensional Euclidean **space** \mathbb{R}^n . If the isotropic curves are introduced as parametric curves, many formulas of **surface** theory are greatly simplified. On a boundedly isotropic curve it has been shown by Study and Vessiot that an invariant parameter may be introduced. It is advantageous to introduce these parameters as **surface** parameters when possible. The author proceeds to establish a theorem of L. Berwald that a **surface** in \mathbb{R}^3 admits the Study-Vessiot parameters only if the **surface** has constant mean curvature. This condition is not sufficient even in \mathbb{R}^3 , and in \mathbb{R}^n for $n > 3$ it is not even necessary, as is shown by an example in \mathbb{R}^4 of a **surface** admitting the Study-Vessiot parameters but not having constant mean curvature. For a minimal **surface** in \mathbb{R}^n the mean curvature is always zero, so the above condition is automatically satisfied. Moreover, a minimal **surface** is always a translation **surface** of isotropic curves. The paper then discusses minimal **surfaces**, primarily in \mathbb{R}^4 , from the **point of view** of the introduction of these parameters. It is established, for example, that among the complex minimal **surfaces** of \mathbb{R}^4 having **plane** nonlinear translation isotropic curves, there are none with constant non-vanishing Gaussian curvature.

12/3,K/9 (Item 9 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2000 American Mathematical Society. All rights reserved.

01038724 MR 12,442d

Kyōkei setsuzoku kikagaku.

Geometry of Conformal Connection]

Sasaki, Shigeo

Publ: Kawade-shobo, Tokyo,

1948, 3+3+265 pp.

Language: Japanese

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (132 lines)

Reviewer: Yano, K.

...the conformal geometry of a Riemannian space may be reduced to the study of the differential invariants of the relative tensor G_{jk} . This **point of view** was adopted by the geometers of the American school: J. Levine, J. M. Thomas, T. Y. Thomas, J. L. Vanderslice, and O. Veblen [cf., e...]

...writers mentioned above studied exclusively the conformal properties of a Riemannian space itself and paid only slight attention to the conformal properties of curves and **surfaces immersed** in a Riemannian **space**. S. Sasaki, Y. Muto, and the reviewer have developed, since 1938, the conformal theory of curves and **surfaces** in a conformally connected space as well as in a Riemannian space. S. Sasaki has obtained also a result on the structure of a conformally...

12/3, K/10 (Item 10 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2000 American Mathematical Society. All rts. reserv.

01001570 MR 1,260d

Zur Begründung der projektiven Geometrie: Einführung idealer Elemente unabhängig von der Anordnung.

Winternitz, Arthur

Ann. of Math.

1940, 41,, 365--390

Language: German

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: MEDIUM (14 lines)

Reviewer: Dorroh, J. L.

The author gives a set of axioms for three-dimensional projective geometry using ``point'' and ``**plane**'' as the only undefined elements and ``incidence'' as the only undefined relation. The properties of spaces (with especial interest in those which may be thought...

...non-associative and only one-side-distributive algebra shows that Hilbert's axioms of ``connection'' for a three-space are insufficient to require that a **space** be **immersible** in a projective **space**. Several methods for strengthening these hypotheses sufficiently to require this **immersibility** are discussed. A brief historical note concerning the **point of view** is appended.

?